

=> file reg

FILE 'REGISTRY' ENTERED AT 21:51:59 ON 20 NOV 2002
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FILE 'REGISTRY' ENTERED AT 21:02:13 ON 20 NOV 2002
E POLYIONENE/PCT

L1 4388 SEA POLYIONENE/PCT
L2 159 SEA L1 AND P/ELS
L3 0 SEA L2 NOT N/ELS

FILE 'LREGISTRY' ENTERED AT 21:04:47 ON 20 NOV 2002
STR

FILE 'REGISTRY' ENTERED AT 21:08:51 ON 20 NOV 2002
L5 SCR 2043 AND 2040
L6 50 S L4 AND L5
L7 STR L4
L8 50 SEA SSS SAM L7 AND L5
L9 10034 SEA SSS FUL L7 AND L5
SAV TEM L9 LAN046/A

FILE 'LREGISTRY' ENTERED AT 21:11:47 ON 20 NOV 2002
STR

FILE 'REGISTRY' ENTERED AT 21:16:18 ON 20 NOV 2002
L11 35 SEA SUB=L9 SSS SAM L10
L12 617 SEA SUB=L9 SSS FUL L10
SAV L12 LAN046A/A
L13 975 SEA L9 AND P/ELS
L14 91 SEA L12 AND L13
L15 526 SEA L12 NOT L14

FILE 'HCA' ENTERED AT 21:18:55 ON 20 NOV 2002
L16 57 SEA L14
L17 531 SEA L15
L18 12505 SEA L9

FILE 'REGISTRY' ENTERED AT 21:19:10 ON 20 NOV 2002
E SINGLET OXYGEN/CN
E OXYGEN (SINGLET)/CN
L19 2 SEA SINGLET(L) OXYGEN
D L19 1-2 FIDE
E OXYGEN/CN
L20 1 SEA OXYGEN/CN

FILE 'HCA' ENTERED AT 21:20:49 ON 20 NOV 2002
L21 9927 SEA (L20 OR OXYGEN# OR O2 OR O) (3A) SINGLET#

FILE 'REGISTRY' ENTERED AT 21:21:38 ON 20 NOV 2002

L22 E ROSE BENGAL/CN
1 SEA "ROSE BENGAL"/CN
E EOSIN Y/CN
L23 2 SEA "EOSIN Y"/CN
E ALIZARIN RED S/CN
L24 1 SEA "ALIZARIN RED S"/CN
E CONGO RED/CN
L25 1 SEA "CONGO RED"/CN
E ORANGE G/CN
L26 5 SEA "ORANGE G"/CN
E FLUORESCEIN/CN
L27 1 SEA FLUORESCEIN/CN
E RHODAMINE/CN
E ERYTHROSIN B/CN
L28 1 SEA "ERYTHROSIN B"/CN
E CHLOROPHYLLIN TRISODIUM SALT/CN
E CHLOROPHYLLIN SODIUM SALT/CN
L29 1 SEA "CHLOROPHYLLINS, SODIUM"/CN
E CHLOROPHYLLIN/CN
L30 2 SEA CHLOROPHYLLIN/CN
E HEMIN/CN
L31 1 SEA HEMIN/CN
E HEMATOPORPHYRIN/CN
L32 1 SEA HEMATOPORPHYRIN/CN
E METHYLENE BLUE/CN
L33 1 SEA "METHYLENE BLUE"/CN
E CRYSTAL VIOLET/CN
L34 1 SEA "CRYSTAL VIOLET"/CN
E MALACHITE GREEN/CN
L35 1 SEA "MALACHITE GREEN"/CN
L36 20 SEA (L22 OR L23 OR L24 OR L25 OR L26 OR L27 OR L28 OR
L29 OR L30 OR L31 OR L32 OR L33 OR L34 OR L35)

FILE 'HCA' ENTERED AT 21:29:02 ON 20 NOV 2002

L37 94281 SEA L36 OR ROSE#(2A)BENGAL# OR EOSIN#(2A)Y OR (ALIZARIN#
OR CONGO#) (2A)RED# OR ORANGE#(2A)G OR FLUORESCEIN# OR
RHODAMINE# OR ERYTHROSIN#(2A)B OR CHLOROPHYLLIN# OR
HEMIN# OR HEMATOPORPHYRIN# OR METHYLENE#(2A)BLUE# OR
CRYSTAL#(2A)VIOLET# OR MALACHITE#(2A)GREEN#
L38 0 SEA L16 AND L21
L39 0 SEA L17 AND L21
L40 1 SEA L18 AND L21
L41 1625 SEA L21 AND L37
L42 54077 SEA (L20 OR OXYGEN# OR O2 OR O) (3A) (EXCIT? OR ACT# OR
ACTIV?)
L43 80342 SEA ((PHOTO OR LIGHT OR PHOTOLY?) (2A) (RX# OR RXN# OR
REACT? OR SENSITI? OR POLYM? OR CURE# OR CURING# OR
CURAB? OR CROSSLINK? OR CROSS(W)LINK? OR CAT# OR
CATALY?)) /BI,AB
L44 89114 SEA ((ULTRAVIOLET? OR ULTRA(W)VIOLET? OR UV# OR SUV OR

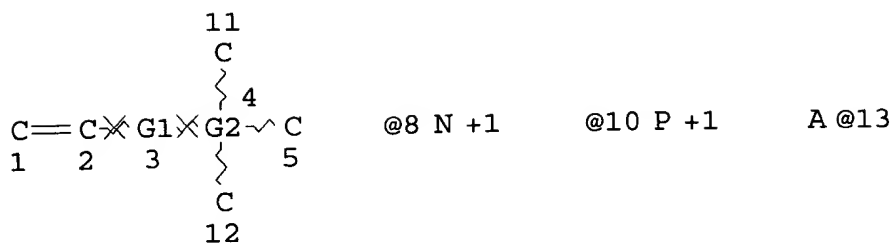
LUV OR RADIA? OR IRRADIA? OR EMANAT? OR EMIT? OR EMISS?
 OR LASER?) (2A) (RX# OR RXN# OR REACT? OR REACT? OR POLYM?
 OR CURE# OR CURING# OR CURAB? OR CAT# OR CATALY? OR
 CROSS(W)LINK? OR CROSSLINK?)) /BI,AB
 L45 143974 SEA (PHOTORX## OR PHOTOREACT? OR PHOTOSENS? OR PHOTOPOLYM
 ? OR PHOTOCUR? OR PHOTOHARDEN? OR PHOTOCROSS? OR
 PHOTOCAT?) /BI,AB
 L46 64879 SEA (POLYM? OR COPOLYM? OR HOMOPOLYM? OR RESIN? OR
 TERPOLYM? OR GUM#) (2A) (L43 OR L44 OR L45)
 L47 12106 SEA (POLYM? OR COPOLYM? OR HOMOPOLYM? OR RESIN? OR
 TERPOLYM? OR GUM#) (3A) (PHOTOSENS? OR PHOTO(2A)SENS?)
 L48 5 SEA (L16 OR L17 OR L18) AND L42
 L49 2075 SEA (L21 OR L42) AND L37
 L50 46 SEA L49 AND L46
 L51 36 SEA L49 AND L47
 L52 3320 SEA L1 OR POLYIONENE#
 L53 0 SEA (L50 OR L51) AND L52
 L54 63068 SEA (QUAT? OR TETRA?) (2A) (AMMONI? OR PHOSPHONI?) OR
 TETRAAMMONI? OR TETRAMMONI? OR TETRAPHOSPHONI?
 L55 0 SEA (L50 OR L51) AND L54
 L56 5 SEA (L21 OR L42) AND L52
 L57 99 SEA (L21 OR L42) AND L54
 L58 1 SEA L57 AND (L46 OR L47)
 L59 7 SEA L57 AND L37
 L60 240 SEA (L46 OR L47) AND (L21 OR L42)
 L61 52 SEA L60 AND L37
 L62 1 SEA L60 AND L54
 L63 0 SEA L61 AND L54
 L64 0 SEA L61 AND L52
 L65 287625 SEA L20
 L66 2206 SEA L65 AND L37
 L67 5 SEA L66 AND (L16 OR L17 OR L18)
 L68 3 SEA L66 AND L52
 L69 7 SEA L66 AND L54
 L70 43 SEA L66 AND (L46 OR L47)
 L71 0 SEA L70 AND L69
 L72 737 SEA (L46 OR L47) AND L65
 L73 1 SEA L72 AND (L16 OR L17 OR L18 OR L52)
 L74 43 SEA L72 AND L37
 L75 0 SEA L74 AND L54
 L76 28 SEA L40 OR L48 OR L56 OR L58 OR L59 OR L62 OR L67 OR L68
 OR L69 OR L73

FILE 'REGISTRY' ENTERED AT 21:51:59 ON 20 NOV 2002

=> d 112 que stat

L5 SCR 2043 AND 2040

L7 STR



REP G1=(0-10) 13

VAR G2=8/10

NODE ATTRIBUTES:

CHARGE IS E+1 AT 8

CHARGE IS E+1 AT 10

NSPEC IS RC AT 5

NSPEC IS RC AT 11

NSPEC IS RC AT 12

NSPEC IS RC AT 13

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

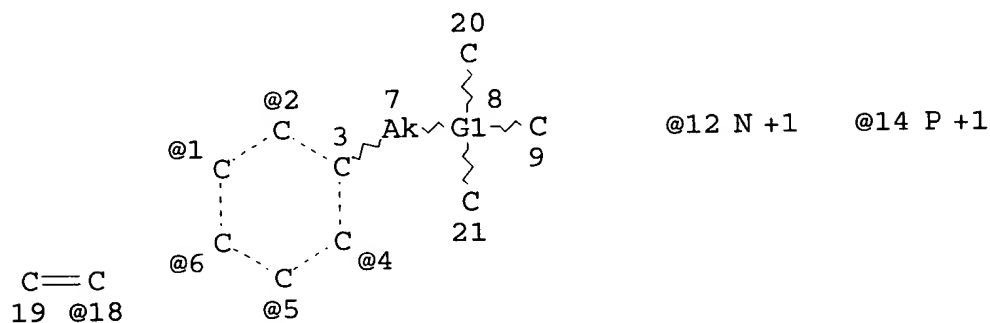
RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE

L9 10034 SEA FILE=REGISTRY SSS FUL L7 AND L5

L10 STR



VAR G1=12/14

VPA 18-4/5/6/1/2 U

NODE ATTRIBUTES:

CHARGE IS E+1 AT 12

CHARGE IS E+1 AT 14

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 15

STEREO ATTRIBUTES: NONE

L12 617 SEA FILE=REGISTRY SUB=L9 SSS FUL L10

100.0% PROCESSED 2939 ITERATIONS
SEARCH TIME: 00.00.01

617 ANSWERS

=> file hca

FILE 'HCA' ENTERED AT 21:52:37 ON 20 NOV 2002

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

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=> d 176 1-28 cbib abs hitstr hitind

L76 ANSWER 1 OF 28 HCA COPYRIGHT 2002 ACS

137:181947 Detection of glucose in solutions also containing an alpha-hydroxy acid or a beta-diketone. Danilooff, George Y.; Kalivretenos, Aristotle G.; Nikolaitchik, Alexandre V. (Sensors for Medicine and Science, Inc., USA). U.S. Pat. Appl. Publ. US 2002127626 A1 20020912, 34 pp., Cont.-in-part of U.S. Ser. No. 754,217. (English). CODEN: USXXCO. APPLICATION: US 2001-29184 20011228. PRIORITY: US 2001-754217 20010105; US 2001-PV269887 20010221; US 2001-PV329746 20011018.

AB The invention concerns compns. and methods for detg. the presence or concn. of glucose in a sample which may also contain an alpha-hydroxy acid or a beta-diketone. The method uses a compd. having at least two recognition elements for glucose, oriented such that the interaction between the compd. and glucose is more stable than the interaction between the compd. and the alpha-hydroxy acid or beta-diketone, such that the presence of the alpha-hydroxy acid or the beta-diketone does not substantially interfere with said detn.

IT 7782-44-7D, Oxygen, derivs.

(detection of glucose in solns. also contg. alpha-hydroxy acid or a beta-diketone)

RN 7782-44-7 HCA

CN Oxygen (8CI, 9CI) (CA INDEX NAME)

O=O

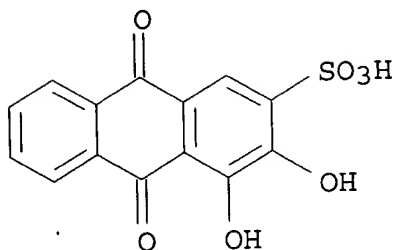
IT 130-22-3, 2-Anthracenesulfonic acid, 9,10-dihydro-3,4-dihydroxy-9,10-dioxo-, monosodium salt

(detection of glucose in solns. also contg. alpha-hydroxy acid or a beta-diketone)

RN 130-22-3 HCA

CN 2-Anthracenesulfonic acid, 9,10-dihydro-3,4-dihydroxy-9,10-dioxo-,

monosodium salt (8CI, 9CI) (CA INDEX NAME)



● Na

IT 399032-68-9P 441011-74-1DP, 1-Propanaminium,
N,N,N-trimethyl-3-[(2-methyl-1-oxo-2-propenyl)amino]-, chloride,
polymer with anthracene, derivs.
(detection of glucose in solns. also contg. alpha-hydroxy acid or
a beta-diketone)

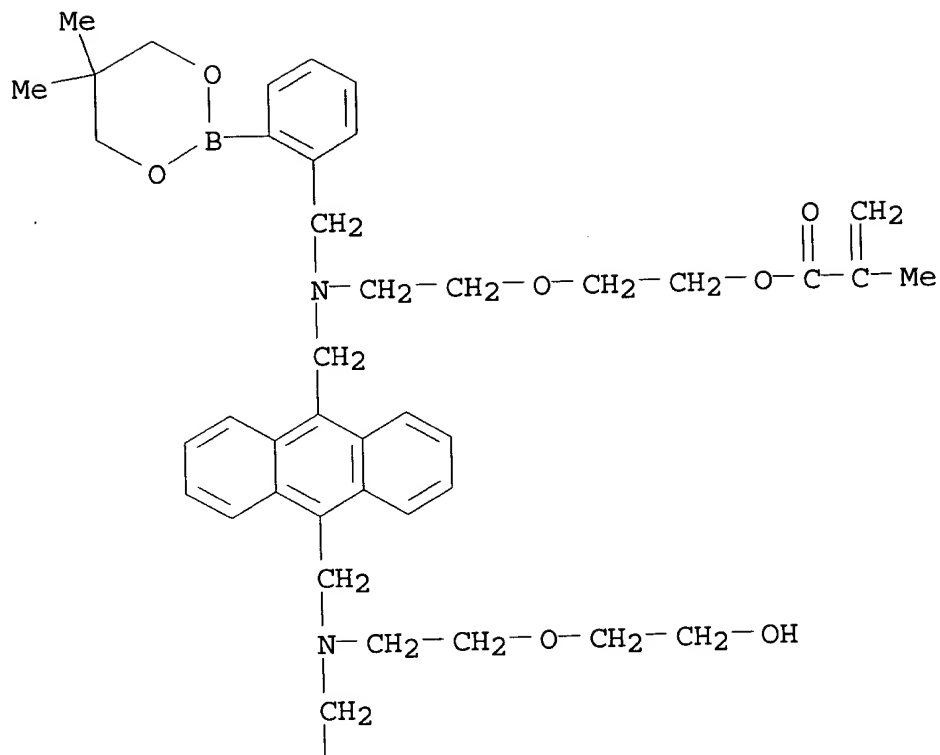
RN 399032-68-9 HCA
CN Ethanaminium, N,N,N-trimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]-,
chloride, polymer with 2-[2-[[[2-(5,5-dimethyl-1,3,2-dioxaborinan-2-
yl)phenyl]methyl][[10-[[[2-(5,5-dimethyl-1,3,2-dioxaborinan-2-
yl)phenyl]methyl][2-(2-hydroxyethoxy)ethyl]amino]methyl]-9-
anthracenyl]methyl]amino]ethoxy]ethyl 2-methyl-2-propenoate (9CI)
(CA INDEX NAME)

CM 1

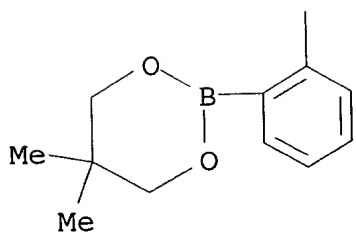
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CMF C52 H66 B2 N2 O9

PAGE 1-A

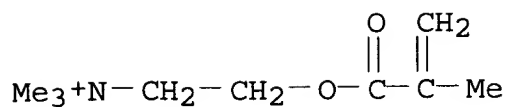


PAGE 2-A



CM 2

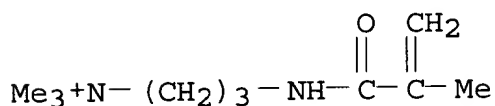
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CMF C9 H18 N O2 . Cl

● Cl⁻

RN 441011-74-1 HCA
 CN 1-Propanaminium, N,N,N-trimethyl-3-[(2-methyl-1-oxo-2-propenyl)amino]-, chloride, polymer with anthracene (9CI) (CA INDEX NAME)

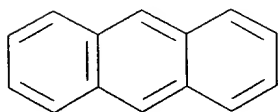
CM 1

CRN 51410-72-1
 CMF C10 H21 N2 O . Cl

● Cl⁻

CM 2

CRN 120-12-7
 CMF C14 H10



IC ICM C12Q001-54
 ICS G01N033-00
 NCL 435014000
 CC 9-16 (Biochemical Methods)
 Section cross-reference(s): 63
 IT 79-09-4D, Propionic acid, derivs. 81-83-4D, Naphthalimide, derivs.
 110-82-7D, Hexamethylene, derivs. 120-12-7D, Anthracene, derivs.
 124-40-3D, Dimethylamine, derivs. 1333-74-0D, Hydrogen, derivs.
 7440-44-0D, Carbon, derivs. 7704-34-9D, Sulfur, derivs.

7723-14-0D, Phosphorus, derivs. 7727-37-9D, Nitrogen, derivs.

7782-44-7D, Oxygen, derivs. 11120-48-2D, Telluric acid,

derivs. 12134-79-1D, Germanic acid, derivs. 13464-58-9D,

Arsenious acid, derivs. 13780-71-7D, Boronic acid, derivs.

15502-74-6D, Arsenite, derivs. 29256-93-7D, Benzenamine,

N,N,?-trimethyl-, derivs. 53112-54-2D, Tellurate ion, derivs.

(detection of glucose in solns. also contg. alpha-hydroxy acid or a beta-diketone)

IT 79-41-4, Methacrylic acid, reactions 81-86-7, 1H,3H-Naphtho[1,8-cd]pyran-1,3-dione, 6-bromo- 100-10-7, 4-Dimethylaminobenzaldehyde 110-18-9, N,N,N',N',-Tetramethylethylenediamine 110-26-9, n,n'-Methylenebisacrylamide 124-09-4, 1,6-Diaminohexane, reactions 128-37-0, Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl-, reactions **130-22-3**, 2-Anthracenesulfonic acid, 9,10-dihydro-3,4-dihydroxy-9,10-dioxo-, monosodium salt 623-27-8, 1,4-Benzenedicarboxaldehyde 645-36-3, Aminoacetaldehyde diethyl acetal 929-06-6 2680-03-7, n,n-Dimethylacrylamide 5039-78-1, Ethanaminium, N,N,N-trimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]-, chloride 6192-52-5, p-Toluenesulfonic acid monohydrate 7087-68-5, Diea 10387-13-0, 9,10-Bis(chloromethyl)anthracene 24463-19-2, 9-Chloromethylantracene 31922-97-1, 2-Propenamide, N,N'-methylenebis-, polymer with 1,2-ethanediol and 2-propenamide 51410-72-1, MAPTAC 57951-36-7, Pyridinamine, N,N-dimethyl- 58620-93-2, .beta.-Alanine, 1,1-dimethylethyl ester, hydrochloride 72607-53-5, N-(3-Aminopropyl)methacrylamide hydrochloride 79238-88-3, 1H-Benz[de]isoquinoline-1,3(2H)-dione, 6-(butylamino)- 399032-71-4, 2-Propenamide, N-[3-[(9,10-dihydro-3,4-dihydroxy-9,10-dioxo-2-anthracenyl)sulfonyl]amino]propyl]-2-methyl- 441011-76-3, Boronic acid, [2-(bromomethyl)phenyl]-, mono(2,2-dimethylpropyl) ester

(detection of glucose in solns. also contg. alpha-hydroxy acid or a beta-diketone)

IT **399032-68-9P** 440665-90-7P, Boronic acid, [2-[[[6-[(2-boronophenyl)methyl][2-[6-(butylamino)-1,3-dioxo-1H-benz[de]isoquinolin-2(3H)-yl]ethyl]amino]hexyl][[4-(dimethylamino)phenyl]methyl]amino]methyl]phenyl]- 440665-98-5P, 1H-Benz[de]isoquinoline-1,3(2H)-dione, 6-(butylamino)-2-[2-[[[6-[[[4-(dimethylamino)phenyl]methyl][[2-(5,5-dimethyl-1,3,2-dioxaborinan-2-yl)phenyl]methyl]amino]hexyl][[2-(5,5-dimethyl-1,3,2-dioxaborinan-2-yl)phenyl]methyl]amino]ethyl]- 440666-19-3P, .beta.-Alanine, N,N'-[9,10-anthracenediylbis(methylene)]bis[N-[[2-(5,5-dimethyl-1,3,2-dioxaborinan-2-yl)phenyl]methyl]-, bis(1,1-dimethylethyl) ester **441011-74-1DP**, 1-Propanaminium, N,N,N-trimethyl-3-[(2-methyl-1-oxo-2-propenyl)amino]-, chloride, polymer with anthracene, derivs. 441011-77-4P, Boronic acid, [9,10-anthracenediylbis[methylene[(1-oxopropyl)imino]methylene-2,1-phenylene]]bis- (detection of glucose in solns. also contg. alpha-hydroxy acid or a beta-diketone)

alpha-hydroxy acid or a beta-diketone. Daniloff, George Y.; Kalivrentenos, Aristotle G.; Nikolaitchik, Alexandre V. (Sensors for Medicine and Science, Inc., USA). PCT Int. Appl. WO 2002057788 A2 20020725, 83 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2002-US199 20020104. PRIORITY: US 2001-754217 20010105; US 2001-PV269887 20010221; US 2001-PV329746 20011018; US 2001-29184 20011228.

AB The invention concerns compns. and methods for detg. the presence or concn. of glucose in a sample which may also contain an alpha-hydroxy acid or a beta-diketone. The method uses a compd. having at least two recognition elements for glucose, oriented such that the interaction between the compd. and glucose is more stable than the interaction between the compd. and the alpha-hydroxy acid or beta-diketone, such that the presence of the alpha-hydroxy acid or the beta-diketone does not substantially interfere with said detn.

IT 7782-44-7D, Oxygen, derivs.
(detection of glucose in solns. also contg. alpha-hydroxy acid or a beta-diketone)

RN 7782-44-7 HCA

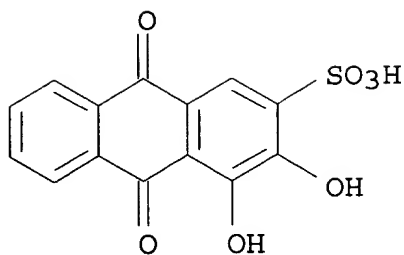
CN Oxygen (8CI, 9CI) (CA INDEX NAME)

O=O

IT 130-22-3
(detection of glucose in solns. also contg. alpha-hydroxy acid or a beta-diketone)

RN 130-22-3 HCA

CN 2-Anthracenesulfonic acid, 9,10-dihydro-3,4-dihydroxy-9,10-dioxo-, monosodium salt (8CI, 9CI) (CA INDEX NAME)



● Na

IT 399032-68-9P 441011-74-1DP, derivs.
(detection of glucose in solns. also contg. alpha-hydroxy acid or a beta-diketone)

RN 399032-68-9 HCA

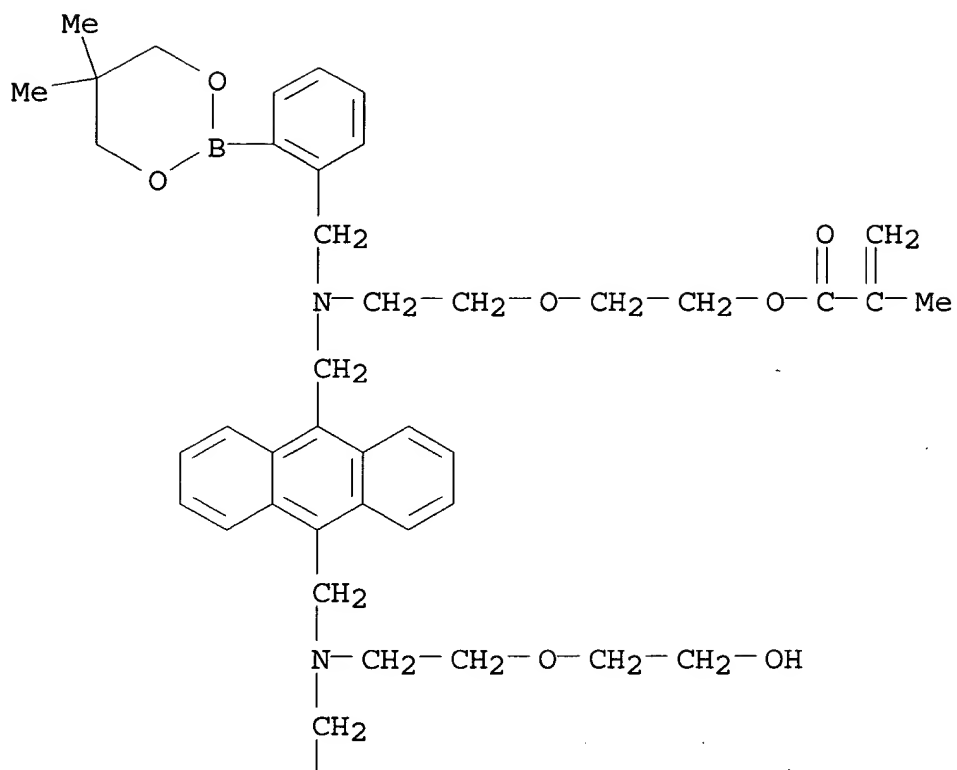
CN Ethanaminium, N,N,N-trimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]-, chloride, polymer with 2-[2-[[[2-(5,5-dimethyl-1,3,2-dioxaborinan-2-yl)phenyl]methyl][[10-[[[2-(5,5-dimethyl-1,3,2-dioxaborinan-2-yl)phenyl]methyl][2-(2-hydroxyethoxy)ethyl]amino]methyl]-9-anthracenyl]methyl]amino]ethoxy]ethyl 2-methyl-2-propenoate (9CI)
(CA INDEX NAME)

CM 1

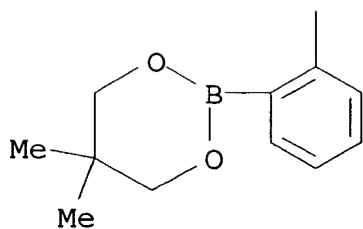
CRN 399032-67-8

CMF C52 H66 B2 N2 O9

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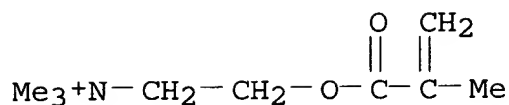
PAGE 2-A



CM 2

CRN 5039-78-1

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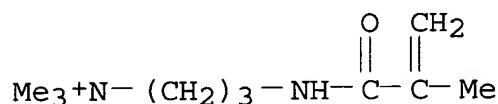


● Cl⁻

RN 441011-74-1 HCA
 CN 1-Propanaminium, N,N,N-trimethyl-3-[(2-methyl-1-oxo-2-propenyl)amino]-, chloride, polymer with anthracene (9CI) (CA INDEX NAME)

CM 1

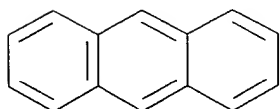
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 CMF C10 H21 N2 O . Cl



● Cl⁻

CM 2

CRN 120-12-7
 CMF C14 H10



IC ICM G01N033-66
 CC 9-16 (Biochemical Methods)
 Section cross-reference(s): 63
 IT 79-09-4D, Propionic acid, derivs. 81-83-4D, Naphthalimide, derivs.
 110-82-7D, Hexamethylene, derivs. 120-12-7D, Anthracene, derivs.
 124-40-3D, Dimethylamine, derivs. 1333-74-0D, Hydrogen, derivs.
 7440-44-0D, Carbon, derivs. 7704-34-9D, Sulfur, derivs.
 7723-14-0D, Phosphorus, derivs. 7727-37-9D, Nitrogen, derivs.
 7782-44-7D, Oxygen, derivs. 11120-48-2D, Telluric acid,

derivs. 12134-79-1D, Germanic acid, derivs. 13464-58-9D, Arsenious acid, derivs. 13780-71-7D, Boronic acid, derivs. 15502-74-6D, Arsenite, derivs. 29256-93-7D, derivs. 53112-54-2D, Tellurate ion, derivs.

(detection of glucose in solns. also contg. alpha-hydroxy acid or a beta-diketone)

IT 79-41-4, Methacrylic acid, reactions 81-86-7 100-10-7, 4-Dimethylaminobenzaldehyde 110-18-9, N,N,N',N',- Tetramethylethylenediamine 110-26-9, n,n'-Methylenebisacrylamide 124-09-4, 1,6-Diaminohexane, reactions 128-37-0, reactions 130-22-3 623-27-8, 1,4-Benzenedicarboxaldehyde 645-36-3, Aminoacetaldehyde diethyl acetal 929-06-6 2680-03-7, n,n-Dimethylacrylamide 5039-78-1 6192-52-5, p-Toluenesulfonic acid monohydrate 7087-68-5, Diea 10387-13-0, 9,10-Bis(chloromethyl)anthracene 24463-19-2, 9-Chloromethylanthracene 31922-97-1 51410-72-1, MAPTAC 57951-36-7 58620-93-2 72607-53-5, N-(3-Aminopropyl)methacrylamide hydrochloride 79238-88-3 399032-71-4 441011-76-3

(detection of glucose in solns. also contg. alpha-hydroxy acid or a beta-diketone)

IT 399032-68-9P 440665-90-7P 440665-98-5P 440666-19-3P 441011-74-1DP, derivs. 441011-77-4P

(detection of glucose in solns. also contg. alpha-hydroxy acid or a beta-diketone)

L76 ANSWER 3 OF 28 HCA COPYRIGHT 2002 ACS

137:90594 Detection of glucose in solutions also containing an alpha-hydroxy acid or a beta-diketone. Daniloff, George Y.; Kalivretenos, Aristotle G.; Nikolaitchik, Alexandre V. (USA). U.S. Pat. Appl. Publ. US 2002090734 A1 20020711, 21 pp. (English). CODEN: USXXCO. APPLICATION: US 2001-754217 20010105.

AB Compns. and methods for detg. the presence or concn. of glucose in a sample which may also contain an alpha-hydroxy acid or a beta-diketone. The method uses a compd. having at least two recognition elements for glucose, oriented such that the interaction between the compd. and glucose is more stable than the interaction between the compd. and the alpha-hydroxy acid or beta-diketone, such that the presence of the alpha-hydroxy acid or the beta-diketone does not substantially interfere with said detn.

IT 7782-44-7D, Oxygen, compds. contg.

(detection of glucose in solns. also contg. alpha-hydroxy acid or a beta-diketone)

RN 7782-44-7 HCA

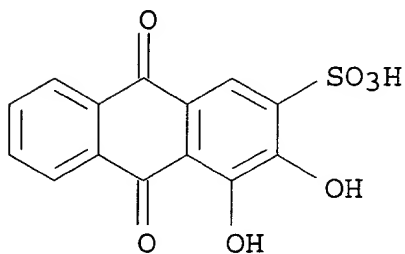
CN Oxygen (8CI, 9CI) (CA INDEX NAME)

O=O

IT 130-22-3

(detection of glucose in solns. also contg. alpha-hydroxy acid or a beta-diketone)

RN 130-22-3 HCA

CN 2-Anthracenesulfonic acid, 9,10-dihydro-3,4-dihydroxy-9,10-dioxo-,
monosodium salt (8CI, 9CI) (CA INDEX NAME)

● Na

IT 399032-68-9P 441011-74-1DP, derivs.

(detection of glucose in solns. also contg. alpha-hydroxy acid or
a beta-diketone)

RN 399032-68-9 HCA

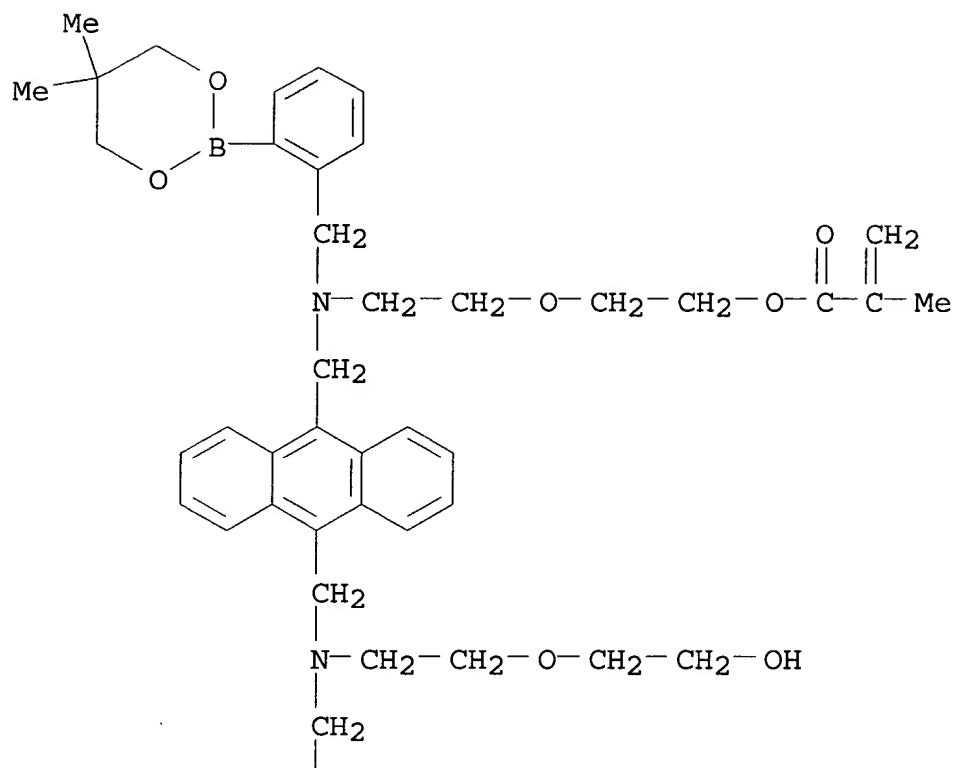
CN Ethanaminium, N,N,N-trimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]-,
chloride, polymer with 2-[2-[[[2-(5,5-dimethyl-1,3,2-dioxaborinan-2-
yl)phenyl]methyl][[10-[[[2-(5,5-dimethyl-1,3,2-dioxaborinan-2-
yl)phenyl]methyl][2-(2-hydroxyethoxy)ethyl]amino]methyl]-9-
anthracenyl]methyl]amino]ethoxy]ethyl 2-methyl-2-propenoate (9CI)
(CA INDEX NAME)

CM 1

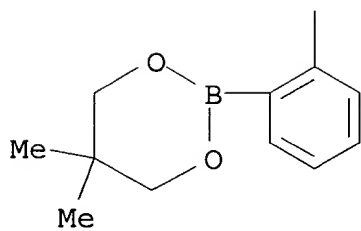
CRN 399032-67-8

CMF C52 H66 B2 N2 O9

PAGE 1-A



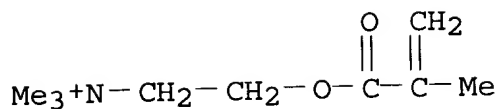
PAGE 2-A



CM 2

CRN 5039-78-1

CMF C9 H18 N O2 . Cl

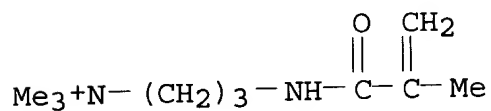


● Cl⁻

RN 441011-74-1 HCA
 CN 1-Propanaminium, N,N,N-trimethyl-3-[(2-methyl-1-oxo-2-propenyl)amino]-, chloride, polymer with anthracene (9CI) (CA INDEX NAME)

CM 1

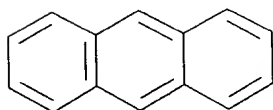
CRN 51410-72-1
 CMF C10 H21 N2 O . Cl



● Cl⁻

CM 2

CRN 120-12-7
 CMF C14 H10



IC ICM C12Q001-54
 ICS G01N033-00
 NCL 436095000
 CC 9-16 (Biochemical Methods)
 Section cross-reference(s): 63
 IT 79-09-4D, Propionic acid, compds. contg. 81-83-4D, Naphthalimide, compds. contg. 110-82-7D, Hexamethylene, compds. contg. 120-12-7D, Anthracene, compds. contg. 124-40-3D, Dimethylamine, compds. contg. 1333-74-0D, Hydrogen, compds. contg. 7440-44-0D,

Carbon, compds. contg. 7704-34-9D, Sulfur, compds. contg. 7723-14-0D, Phosphorus, compds. contg. 7727-37-9D, Nitrogen, compds. contg. **7782-44-7D**, Oxygen, compds. contg. 11120-48-2D, Telluric acid, compds. contg. 12134-79-1D, Germanic acid, compds. contg. 13464-58-9D, Arsenious acid, compds. contg. 13780-71-7D, Boronic acid, compds. contg. 15502-74-6D, Arsenite, compds. contg. 29256-93-7D, compds. contg. 53112-54-2D, Tellurate ion, compds. contg.

(detection of glucose in solns. also contg. alpha-hydroxy acid or a beta-diketone)

IT 79-41-4, Methacrylic acid, reactions 81-86-7 100-10-7,
4-Dimethylaminobenzaldehyde 110-18-9, N,N,N',N',-
Tetramethylethylenediamine 110-26-9, n,n'-Methylenebisacrylamide
124-09-4, 1,6-Diaminohexane, reactions 128-37-0, reactions
130-22-3 623-27-8, 1,4-Benzenedicarboxaldehyde 645-36-3,
Aminoacetaldehyde diethyl acetal 929-06-6, 2-(2-
Aminoethoxy)ethanol 2680-03-7, n,n-Dimethylacrylamide 5039-78-1,
TMAMA 6192-52-5, p-Toluenesulfonic acid monohydrate 7087-68-5,
Diea 10387-13-0, 9,10-Bis(chloromethyl)anthracene 24463-19-2,
9-Chloromethylanthracene 31922-97-1 51410-72-1, MAPTAC
57951-36-7 58620-93-2 72607-53-5, N-(3-
Aminopropyl)methacrylamide hydrochloride 79238-88-3 399032-64-5
399032-71-4 441011-76-3

(detection of glucose in solns. also contg. alpha-hydroxy acid or a beta-diketone)

IT **399032-68-9P** 440665-90-7P 440665-98-5P 440666-19-3P
441011-74-1DP, derivs. 441011-77-4P

(detection of glucose in solns. also contg. alpha-hydroxy acid or a beta-diketone)

L76 ANSWER 4 OF 28 HCA COPYRIGHT 2002 ACS

137:35146 **Active oxygen**-containing water

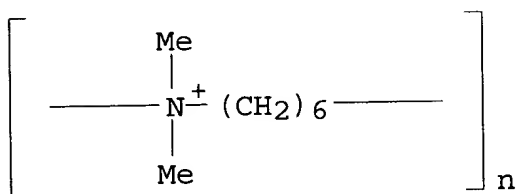
purification agents prepared from peroxygen salts and phosphated inorganic metasilicates. Boukari, Morou; Auriol, Marc; Auriol, Sophie (Institut Francais du Petrole, Fr.; Eotec). PCT Int. Appl. WO 2002048030 A1 20020620, 28 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW; RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR. (French). CODEN: PIXXD2. APPLICATION: WO 2001-FR3974 20011213. PRIORITY: FR 2000-16367 20001215.

AB Peroxosilicated disinfectant preps., optionally phosphated, esp. for water purifn., which are at least partially sol. in water, are obtained by reaction of an alkali metal metasilicate or alk. earth metal metasilicate (preferably sodium metasilicate or potassium metasilicate) with a compn. that liberates **active oxygen**. The reaction takes place under substantially neutral pH in the presence of an inorg. phosphate and, optionally, a stabilizer for the **active oxygen**-contg. compd.

Suitable **active oxygen** compds. include hydrogen peroxide, sodium monopersulfate, potassium monopersulfate, sodium acid monopersulfate, potassium acid monopersulfate, sodium peroxydisulfate, sodium peroxide, lithium peroxide, barium peroxide, sodium peroxyborate, and potassium peroxydisulfate. Copper and aluminum in salt form can be encapsulated or complexed with the metasilicate so that the resulting peroxosilicated compd. can be used for its disinfecting, scale preventive, anticorrosive, flocculating and algicidal properties for more than three weeks.

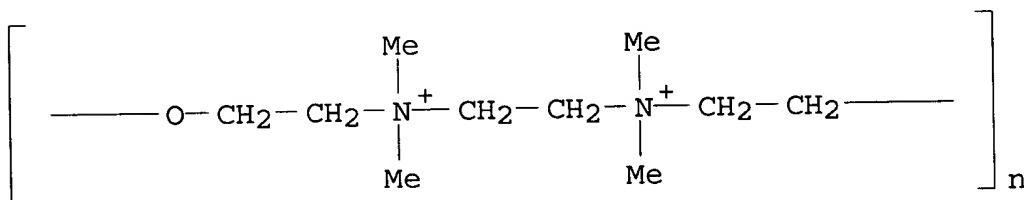
IT 28728-61-2, Poly[(dimethyliminio)-1,6-hexanediyl chloride]
 31512-74-0, Poly[oxy-1,2-ethanediyl(dimethyliminio)-1,2-ethanediyl(dimethyliminio)-1,2-ethanediyl dichloride]
 (stabilizers, water purifn. agents contg.; **active oxygen**-contg. water purifn. agents prepd. from peroxygen salts and phosphated inorg. metasilicates)

RN 28728-61-2 HCA
 CN Poly[(dimethyliminio)-1,6-hexanediyl chloride] (9CI) (CA INDEX NAME)



● Cl⁻

RN 31512-74-0 HCA
 CN Poly[oxy-1,2-ethanediyl(dimethyliminio)-1,2-ethanediyl(dimethyliminio)-1,2-ethanediyl dichloride] (9CI) (CA INDEX NAME)



2 Cl⁻

IC ICM C01B015-14
 CC 49-4 (Industrial Inorganic Chemicals)

- Section cross-reference(s): 61
- IT Algicides
 - Antibacterial agents
 - Corrosion inhibitors
 - Disinfectants
 - Flocculants
 - Scale inhibitors
 - (**active oxygen**-contg. water purifn. agents prepd. from peroxygen salts and phosphated inorg. metasilicates)
 - IT Scale (deposits)
 - (control, agents for; **active oxygen**-contg. water purifn. agents prepd. from peroxygen salts and phosphated inorg. metasilicates)
 - IT Water purification
 - (corrosion prevention, agents for; **active oxygen**-contg. water purifn. agents prepd. from peroxygen salts and phosphated inorg. metasilicates)
 - IT Water purification
 - (flocculation, agents for; **active oxygen**-contg. water purifn. agents prepd. from peroxygen salts and phosphated inorg. metasilicates)
 - IT Quaternary ammonium compounds, uses
 - (polymers, stabilizers, water purifn. agents contg.; **active oxygen**-contg. water purifn. agents prepd. from peroxygen salts and phosphated inorg. metasilicates)
 - IT Polyphosphoric acids
 - (sodium salts, stabilizer, water purifn. agents contg.; **active oxygen**-contg. water purifn. agents prepd. from peroxygen salts and phosphated inorg. metasilicates)
 - IT Water purification
 - (sterilization and disinfection, agents for; **active oxygen**-contg. water purifn. agents prepd. from peroxygen salts and phosphated inorg. metasilicates)
 - IT 1304-29-6, Barium peroxide 1313-60-6, Sodium peroxide 7632-04-4
 7722-84-1, Hydrogen peroxide, uses 7727-21-1, Potassium peroxydisulfate 7775-27-1, Sodium peroxydisulfate 10058-23-8,
 Peroxymonosulfuric acid, monopotassium salt 12031-80-0, Lithium peroxide 28831-12-1, Sodium monopersulfate
 (**active oxygen** compd., water purifn. agents contg.; **active oxygen**-contg. water purifn. agents prepd. from peroxygen salts and phosphated inorg. metasilicates)
 - IT 7681-38-1, Sodium bisulfate
 - (neutralization agent, water purifn. agents contg.; **active oxygen**-contg. water purifn. agents prepd. from peroxygen salts and phosphated inorg. metasilicates)
 - IT 7558-80-7, Monosodium phosphate 7664-38-2, Phosphoric acid, uses
 - (phosphating agent, water purifn. agents contg.; **active oxygen**-contg. water purifn. agents prepd. from peroxygen salts and phosphated inorg. metasilicates)
 - IT 6834-92-0, Sodium metasilicate 7699-41-4D, Silicic acid, H₂SiO₃,
 alkali metal and alk. earth metal salts 7758-98-7, Copper(2+)

- sulfate, processes 10006-28-7, Potassium metasilicate
(reactions of; **active oxygen**-contg. water
purifn. agents prepd. from peroxygen salts and phosphated inorg.
metasilicates)
- IT 13764-79-9, Potassium hexametaphosphate
(stabilizer, water purifn. agents contg.; **active
oxygen**-contg. water purifn. agents prepd. from peroxygen
salts and phosphated inorg. metasilicates)
- IT 106-89-8, 1-Chloro-2,3-epoxypropane, uses 288-32-4, 1H-Imidazole,
uses 24307-30-0, Azoniacyclotridecane, 1,1-dimethyl-, chloride
28728-61-2, Poly[(dimethyliminio)-1,6-hexanediyl chloride]
31512-74-0, Poly[oxy-1,2-ethanediyl(dimethyliminio)-1,2-
ethanediyl(dimethyliminio)-1,2-ethanediyl dichloride]
(stabilizers, water purifn. agents contg.; **active
oxygen**-contg. water purifn. agents prepd. from peroxygen
salts and phosphated inorg. metasilicates)
- L76 ANSWER 5 OF 28 HCA COPYRIGHT 2002 ACS
136:355771 Synthesis of cinnamate and **quaternary
ammonium** salt-containing phenolic **resin** and its
photocrosslinking. Gan, Zhiwei; Huang, Shuhuai; Xie,
Hongquan (College of Material Sci. & Eng., HUST, Wuhan, 430074,
Peop. Rep. China). Huazhong Keji Daxue Xuebao, Ziran Kexueban,
29(9), 106-108 (Chinese) 2001. CODEN: HKDXAT. ISSN: 1671-4512.
Publisher: Huazhong Keji Daxue Xuebao Bianjibu.
- AB Phenolic resin contained cinnamate and ion salt groups is
synthesized by ring-opening reaction of epoxy groups of epoxy
phenolic resin with cinnamic acid and an ionization reagent. Soly.
and UV-photocuring properties are also investigated in this paper.
Cinnamate and ion salt-contained phenolic resin show very good soly.
in water and some org. solvents, such as ethanol, chloroform, and
DMF. Overlaying **oxygen** barrier layer, appending
active diluent monomer and prolonging exposure time are in
favor of the photopolymn. of the product.
- CC 37-6 (Plastics Manufacture and Processing)
ST cinnamate **quaternary ammonium** salt phenolic
resin photocrosslinking
- IT Phenolic resins, reactions
(epoxy, novolak; synthesis of cinnamate and **quaternary
ammonium** salt-contg. phenolic **resin** and its
photocrosslinking)
- IT Epoxy resins, reactions
(phenolic, novolak; synthesis of cinnamate and **quaternary
ammonium** salt-contg. phenolic **resin** and its
photocrosslinking)
- IT Crosslinking
(photochem.; synthesis of cinnamate and **quaternary
ammonium** salt-contg. phenolic **resin** and its
photocrosslinking)
- IT 121-69-7DP, N,N-Dimethylaniline, reaction products with
phenolic-epoxy resin cinnamates 621-82-9DP, Cinnamic acid,
reaction products with phenolic-epoxy resin and crosslinkers

4074-88-8DP, Diethylene glycol diacrylate, reaction products with phenolic-epoxy resin cinnamates
(synthesis of cinnamate and **quaternary ammonium** salt-contg. phenolic **resin** and its **photocrosslinking**)

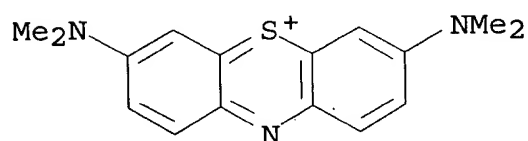
L76 ANSWER 6 OF 28 HCA COPYRIGHT 2002 ACS

136:119758 Antibacterial activity of basic dyes on the dyed acrylic fibers. Sawa, Yuko; Hoten, Masanobu (Department of Human Environmental Sciences, School of Human Environmental Science, Mukogawa Women's University, Ikebiraki-cho, Nishinomiya, Japan). Sen'i Gakkaishi, 57(5), 153-158 (Japanese) 2001. CODEN: SENGAS. ISSN: 0037-9875. Publisher: Sen'i Gakkai.

AB Antimicrobial activity against 2 species bacteria of six basic dyes and benzalkonium chloride as a retarding agent in dyed acrylic fibers was investigated by means of the JIS L1902 test. To examine the effect of the dye concn. in the dyed fibers on antibacterial activity, the ratio of dye concn. in the dyed fibers to its relative satn. value (SOR) was used. The test demonstrated that antibacterial activity of the dyed fibers was related to a min. bactericidal concn. of the resp. dyes and benzalkonium chloride, depending on the chem. structure of the dyes. Antibacterial activities in the dyed fibers with the basic dyes of triphenylmethane, azine, azo, and thiazine type decreased in that order. The antibacterial activity was apt to increase with SOR. Bactericidal activity against Staphylococcus aureus IF012732 was shown in all dyes except thiazine, whereas that against Escherichia coli K12 W3110 was low. Benzalkonium chloride was equally effective against both bacteria and improved antibacterial activity in the dyed fibers with lower SOR level of **Malachite Green**.

IT 61-73-4, **Methylene blue**
(blue dye; antibacterial activity of basic dyes on acrylic fibers)

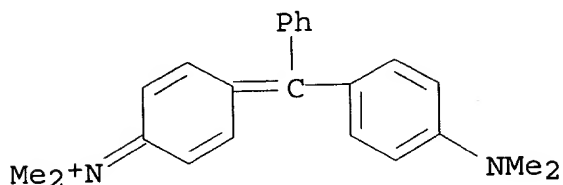
RN 61-73-4 HCA
CN Phenothiazin-5-ium, 3,7-bis(dimethylamino)-, chloride (9CI) (CA INDEX NAME)



● Cl⁻

IT 569-64-2, **Malachite green**
(green dye; antibacterial activity of basic dyes on acrylic fibers)

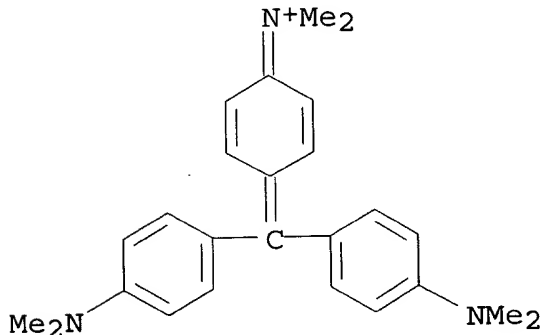
RN 569-64-2 HCA
 CN Methanaminium, N-[4-[[4-(dimethylamino)phenyl]phenylmethylenel]-2,5-cyclohexadien-1-ylidene]-N-methyl-, chloride (9CI) (CA INDEX NAME)



● Cl⁻

IT 548-62-9, **Crystal violet**
 (violet dye; antibacterial activity of basic dyes on acrylic fibers)

RN 548-62-9 HCA
 CN Methanaminium, N-[4-[bis[4-(dimethylamino)phenyl]methylenel]-2,5-cyclohexadien-1-ylidene]-N-methyl-, chloride (9CI) (CA INDEX NAME)



● Cl⁻

CC 40-6 (Textiles and Fibers)
 Section cross-reference(s): 10

IT **Quaternary ammonium** compounds, biological studies
 (alkylbenzyltrimethyl, chlorides; in assessment of antibacterial activity of basic dyes on acrylic fibers)

IT 61-73-4, **Methylene blue**
 (blue dye; antibacterial activity of basic dyes on acrylic fibers)

IT 477-73-6, **Safranin O**

- (dye; antibacterial **activity** of basic dyes on acrylic fibers)
- IT 569-64-2, **Malachite green**
(green dye; antibacterial activity of basic dyes on acrylic fibers)
- IT 548-62-9, **Crystal violet**
(violet dye; antibacterial activity of basic dyes on acrylic fibers)

L76 ANSWER 7 OF 28 HCA COPYRIGHT 2002 ACS

135:124156 Bactericide combinations in detergents. Elsmore, Richard; Houghton, Mark Phillip (Robert McBride Ltd., UK). Brit. UK Pat. Appl. GB 2354771 A1 20010404, 53 pp. (English). CODEN: BAXXD. APPLICATION: GB 1999-23253 19991001.

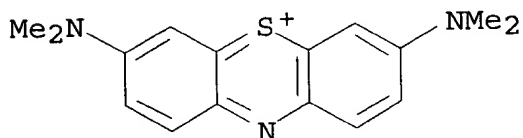
AB The detergent comprises a bactericide in combination with an anionic, cationic, nonionic or amphoteric surfactant which has a C12-18 alkyl group as the longest chain attached to the hydrophilic moiety. Creduret 50 (hydrogenated ethoxylated castor oil) 50, citric acid 12, formalin 10, sodium alkyl benzene sulfonate (C12-20) alkyl 1, perfume white line 0.5, detergent enzyme savingase 0.2, and bactericide Pr 4-hydroxybenzoate 1.0 parts formed a detergent, showing redn. activity after contact 2.

IT 61-73-4 7782-44-7, Oxygen, uses 25988-97-0
26062-79-3 28728-61-2 31075-24-8
31512-74-0 39660-17-8 63943-38-4
351224-26-5

(bactericide combinations in detergents)

RN 61-73-4 HCA

CN Phenothiazin-5-ium, 3,7-bis(dimethylamino)-, chloride (9CI) (CA INDEX NAME)



● Cl⁻

RN 7782-44-7 HCA

CN Oxygen (8CI, 9CI) (CA INDEX NAME)

O=O

RN 25988-97-0 HCA

CN Methanamine, N-methyl-, polymer with (chloromethyl)oxirane (9CI)
(CA INDEX NAME)

CM 1

CRN 124-40-3

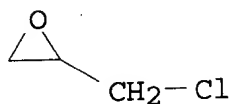
CMF C2 H7 N



CM 2

CRN 106-89-8

CMF C3 H5 Cl O

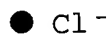
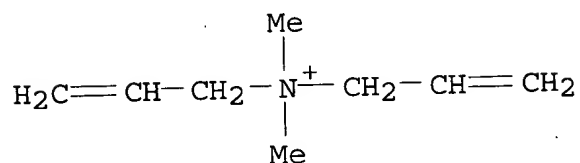


RN 26062-79-3 HCA
 CN 2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride,
 homopolymer (9CI) (CA INDEX NAME)

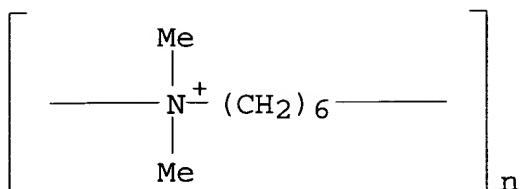
CM 1

CRN 7398-69-8

CMF C8 H16 N . Cl



RN 28728-61-2 HCA
 CN Poly[(dimethylininio)-1,6-hexanediyl chloride] (9CI) (CA INDEX
 NAME)

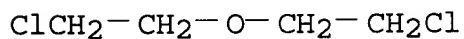


● Cl⁻

RN 31075-24-8 HCA
 CN 1,2-Ethanediamine, N,N,N',N'-tetramethyl-, polymer with
 1,1'-oxybis[2-chloroethane] (9CI) (CA INDEX NAME)

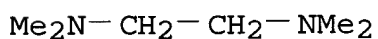
CM 1

CRN 111-44-4
 CMF C4 H8 Cl2 O

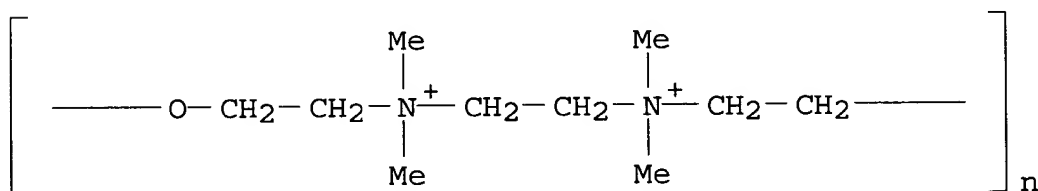


CM 2

CRN 110-18-9
 CMF C6 H16 N2

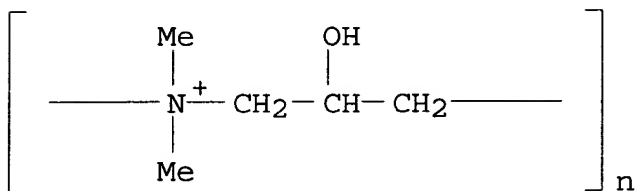


RN 31512-74-0 HCA
 CN Poly[oxy-1,2-ethanediyl(dimethyliminio)-1,2-
 ethanediyl(dimethyliminio)-1,2-ethanediyl dichloride] (9CI) (CA
 INDEX NAME)



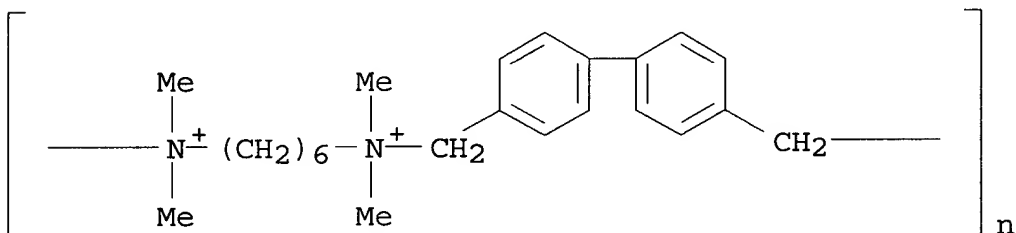
2 Cl⁻

RN 39660-17-8 HCA
 CN Poly[(dimethyliminio) (2-hydroxy-1,3-propanediyl) chloride] (9CI)
 (CA INDEX NAME)



● Cl⁻

RN 63943-38-4 HCA
 CN Poly[(dimethyliminio) -1,6-hexanediyl (dimethyliminio)methylene[1,1'-biphenyl]-4,4'-diylmethylene dichloride] (9CI) (CA INDEX NAME)



● 2 Cl⁻

RN 351224-26-5 HCA
 CN 1,6-Hexanediamine, N,N,N',N'-tetramethyl-, polymer with
 (chloromethyl)oxirane, hydrochloride, compd. with
 (chloromethyl)benzene (9CI) (CA INDEX NAME)

CM 1

CRN 100-44-7

CMF C7 H7 Cl

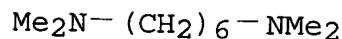
Ph-CH₂-Cl

CM 2

CRN 110563-13-8
 CMF (C10 H24 N2 . C3 H5 Cl O)x
 CCI PMS

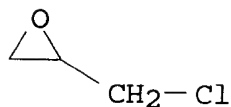
CM 3

CRN 111-18-2
 CMF C10 H24 N2



CM 4

CRN 106-89-8
 CMF C3 H5 Cl O



- IC ICM C11D003-48
 CC 46-6 (Surface Active Agents and Detergents)
 IT **Quaternary ammonium** compounds, uses
 (C12-14-alkyltrimethyl, chlorides; bactericide combinations in
 detergents)
 IT **Quaternary ammonium** compounds, uses
 (alkylbenzyltrimethyl, chlorides; bactericide combinations in
 detergents)
 IT **Quaternary ammonium** compounds, uses
 (benzyl-C12-14-alkyldimethyl, chlorides; bactericide combinations
 in detergents)
 IT **Quaternary ammonium** compounds, uses
 (benzyl-C12-16-alkyldimethyl, chlorides; bactericide combinations
 in detergents)
 IT **Quaternary ammonium** compounds, uses
 (benzyl-C12-18-alkyldimethyl, chlorides; bactericide combinations
 in detergents)
 IT **Quaternary ammonium** compounds, uses
 (benzyl-C12-18-alkyldimethyl, salts with 1,2-benzisothiazol-3(2H)-
 one 1,1-dioxide (1:1); bactericide combinations in detergents)
 IT **Quaternary ammonium** compounds, uses
 (benzyl-C16-18-alkyldimethyl, chlorides; bactericide combinations
 in detergents)
 IT **Quaternary ammonium** compounds, uses
 (coco alkyltrimethyl, chlorides; bactericide combinations in
 detergents)
 IT **Quaternary ammonium** compounds, uses

(dialkyldimethyl, chlorides; bactericide combinations in detergents)

IT **Quaternary ammonium** compounds, uses
(dicoco alkyldimethyl, chlorides; bactericide combinations in detergents)

IT 50-00-0, Formaldehyde, uses 50-00-0D, Formaldehyde, reaction products, uses 50-14-6 50-21-5, uses 50-65-7 50-99-7, D-Glucose, uses 51-03-6 51-28-5, uses 52-51-7 52-68-6 54-21-7 54-64-8 55-38-9 55-56-1 55-86-7 56-35-9 56-36-0 56-37-1 56-38-2 56-95-1 57-09-0 57-10-3, Hexadecanoic acid, uses 57-15-8 57-24-9, Strychnidin-10-one 57-55-6D, Propylene glycol, reaction products with formaldehyde 58-36-6 58-89-9 59-50-7 59-87-0 60-12-8, Benzeneethanol 60-51-5 **61-73-4** 62-38-4 62-56-6, Thiourea, uses 62-73-7 63-25-2 64-18-6, Formic acid, uses 64-18-6D, Formic acid, reaction products 64-19-7D, Acetic acid, derivs., uses 64-69-7 67-20-9 67-63-0D, 2-Propanol, reaction products with boron trifluoride and 5-ethylidenebicyclo[2.2.1]hept-2-ene, uses 67-66-3, uses 67-68-5, uses 67-97-0 69-72-7, uses 70-55-3 71-23-8, 1-Propanol, uses 71-41-0, 1-Pentanol, uses 72-43-5 72-56-0 74-83-9, uses 75-12-7D, Formamide, reaction products with formaldehyde, uses 75-21-8, Oxirane, uses 75-31-0, 2-Propanamine, uses 75-91-2 76-06-2 76-22-2 76-39-1 76-87-9 77-42-9 77-48-5 77-49-6 77-78-1D, Dimethyl sulfate, quaternized with 9-octadecenoic acid/triethanolamine reaction products 77-78-1D, Dimethyl sulfate, quaternized with fatty acid/triethanolamine reaction products 77-92-9, uses 78-59-1 78-69-3 78-70-6 78-79-5D, Isoprene, reaction products with acetic acid 78-83-1, uses 78-92-2, 2-Butanol 79-07-2 79-08-3 79-11-8, uses 79-11-8D, Chloroacetic acid, reaction products with N-C10-16-alkyltrimethylenediamines 79-11-8D, Acetic acid, chloro-, reaction products with diethylenetriamine N-mono- and di-C8-18-alkyl derivs., uses 79-14-1, uses 79-20-9 79-21-0, Ethaneperoxoic acid 79-69-6 79-92-5D, 2,2-Dimethyl-3-methylenebicyclo[2.2.1]heptane, reaction products with 2-methoxyphenol, hydrogenated 80-26-2 80-27-3 80-46-6 80-71-7 81-07-2D, 1,2-Benzisothiazol-3(2H)-one 1,1-dioxide, salts with **quaternary ammonium** compds., benzyl-C12-18-alkyldimethyl (1:1) 81-14-1 81-15-2 81-81-2 81-82-3 82-66-6 83-34-1 83-79-4 84-65-1, 9,10-Anthracenedione 84-66-2 84-74-2 85-91-6 87-10-5 87-17-2 87-20-7 87-22-9 87-90-1 88-04-0 88-06-2 88-14-2, 2-Furancarboxylic acid 88-84-6 89-68-9 89-78-1 89-79-2 89-83-8 90-05-1D, Phenol, 2-methoxy-, reaction products with 2,2-dimethyl-3-methylenebicyclo[2.2.1]heptane, hydrogenated 90-13-1 90-17-5 90-43-7, [1,1'-Biphenyl]-2-ol 90-43-7D, [1,1'-Biphenyl]-2-ol, chlorinated 90-87-9 91-20-3, Naphthalene, uses 91-61-2 91-64-5, 2H-1-Benzopyran-2-one 93-15-2 93-16-3 93-51-6 93-59-4, Benzenecarboperoxoic acid 93-65-2 93-69-6 93-89-0 94-13-3 94-18-8 94-26-8 94-36-0, uses 94-96-2 95-14-7, 1H-Benzotriazole 95-41-0 95-48-7, uses 96-24-2 96-29-7 97-23-4 97-24-5 97-54-1 97-77-8 98-01-1,

2-Furancarboxaldehyde, uses 98-11-3D, Benzenesulfonic acid, mono-C10-14-alkyl derivs., compds. with Me 1H-benzimidazol-2-ylcarbamate, uses 98-53-3 98-55-5 99-49-0 99-76-3 99-86-5 100-37-8 100-44-7, uses 100-51-6, Benzenemethanol, uses 100-52-7, Benzaldehyde, uses 100-73-2 100-86-7 100-89-0 100-97-0, uses 101-20-2 101-21-3 101-39-3 101-53-1 101-84-8 101-85-9 102-17-0 102-20-5 102-30-7 102-71-6D, copper complexes 102-71-6D, Triethanolamine, reaction products with 9-octadecenoic acid, di-Me sulfate-quaternized 102-98-7 103-05-9 103-26-4 103-52-6 103-82-2, Benzeneacetic acid, uses 103-95-7 104-09-6 104-21-2 104-29-0 104-53-0, Benzenepropanal 104-54-1 104-55-2 104-60-9 104-61-0 104-62-1 104-67-6 104-76-7 104-78-9 104-87-0 105-01-1 105-66-8 105-85-1 105-87-3 105-90-8 106-22-9 106-24-1 106-25-2 106-30-9 106-44-5, uses 106-46-7 106-70-7 106-72-9 106-73-0 106-79-6 106-88-7 106-89-8, uses 107-02-8, 2-Propenal, uses 107-21-1D, Ethylene glycol, reaction products with formaldehyde 107-22-2, Ethanedial 107-41-5 107-43-7 107-75-5 107-95-9D, .beta.-Alanine, N-coco alkyl derivs. 108-16-7 108-39-4, uses 108-64-5 108-80-5, 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione 108-88-3, uses 108-89-4 108-94-1, Cyclohexanone, uses 108-95-2, Phenol, uses 108-95-2D, Phenol, polypropene derivs., uses 108-99-6 109-21-7 109-89-7, uses 110-05-4 110-15-6, Butanedioic acid, uses 110-27-0 110-38-3 110-41-8 110-44-1 110-58-7, 1-Pentanamine 110-62-3, Pentanal 110-75-8 110-86-1, Pyridine, uses 110-89-4, Piperidine, uses 111-11-5 111-27-3, 1-Hexanol, uses 111-30-8, Pentanedial 111-40-0D, 1,2-Ethanediamine, N-(2-aminoethyl)-, reaction products with 1-chlorooctane 111-40-0D, Diethylenetriamine, reaction products with chloroacetic acid, N-mono- and di-C8-18-alkyl derivs. 111-41-1D, 2-(2-Aminoethyl)aminoethanol, reaction with coco fatty acids, quaternized 111-42-2, uses 111-46-6D, Diethylene glycol, reaction products with formaldehyde

(bactericide combinations in detergents)

IT 7778-66-7 7779-27-3 7779-73-9 7779-78-4 7779-81-9
7782-44-7, Oxygen, uses 7782-50-5, Chlorine, uses 7783-20-2, Sulfuric acid diammonium salt, uses 7783-90-6, Silver chloride (AgCl), uses 7786-29-0 7786-30-3, Magnesium chloride (MgCl₂), uses 7789-09-5 7789-12-0 7789-29-9, Potassium fluoride (K(HF₂)) 7789-33-5, Iodine bromide (IBr) 7790-28-5 7790-99-0, Iodine chloride (ICl) 7803-51-2, Phosphine 8000-41-7, Terpeneol 8007-35-0 8018-01-7 9001-37-0 9002-91-9 9003-07-0D, Polypropylene, phenol derivs. 9003-29-6 9003-63-8 9003-99-0, Peroxidase 9004-82-4 9004-98-2 10028-15-6, Ozone, uses 10031-43-3 10032-15-2 10043-35-3, Boric acid (H₃BO₃), uses 10049-04-4, Chlorine oxide (ClO₂) 10058-23-8 10101-41-4 10124-37-5 10154-75-3 10187-52-7 10198-23-9 10222-01-2 10235-63-9 10294-64-1 10332-33-9 10339-55-6 10345-79-6 10377-60-3 10378-23-1 10380-28-6 10453-86-8 10460-00-1 10482-56-1 10486-00-7 10543-57-4 10588-01-9 10588-15-5 10595-49-0 10605-21-7 10605-21-7D, Methyl 1H-benzimidazol-2-

ylcarbamate, compds. with benzenesulfonic acid mono-C10-14-alkyl
 derivs. 11031-45-1, Santalol 11050-62-7 11084-85-8, Sodium
 hypochlorite phosphate (Na13(ClO)(PO4)4) 11096-42-7 12008-41-2,
 Boron sodium oxide (B8Na2O13) 12062-24-7 12069-69-1 12122-67-7
 12124-97-9, Ammonium bromide ((NH4)Br) 12179-04-3 12267-73-1
 12280-03-4 12427-38-2 13014-03-4 13019-22-2, 9-Decen-1-ol
 13052-19-2 13108-52-6 13149-79-6 13167-25-4 13197-76-7
 13254-34-7 13351-61-6 13426-91-0 13435-05-7 13463-41-7
 13463-67-7, Titanium oxide (TiO2), uses 13516-27-3 13517-11-8,
 Hypobromous acid 13532-18-8 13590-97-1 13701-59-2 13707-65-8
 13720-12-2 13755-29-8 13824-96-9 13826-83-0 13840-33-0
 13863-41-7, Bromine chloride (BrCl) 13877-91-3 13980-04-6
 14073-97-3 14371-10-9 14548-60-8 14576-08-0 14667-55-1
 14676-61-0D, 1-Propanamine, 3-(tridecyloxy)-, branched 14762-38-0
 14816-18-3 14915-37-8 14936-67-5 15323-35-0 15435-29-7
 15510-55-1 15627-09-5 15630-89-4 15707-23-0 15733-22-9
 15739-09-0 15809-19-5 15986-80-8 16079-88-2 16219-75-3D,
 5-Ethylidenebicyclo[2.2.1]hept-2-ene, reaction products with boron
 trifluoride and 2-propanol 16228-00-5 16409-43-1 16491-36-4
 16752-77-5 16828-95-8 16871-71-9 16893-85-9 16919-19-0
 16949-65-8 16961-83-4 17084-08-1 17342-21-1 17804-35-2
 18181-70-9 18181-80-1 18205-85-1 18339-16-7 18472-51-0
 18479-54-4 18479-57-7 18675-16-6 18675-17-7 18794-84-8
 18829-56-6 18854-01-8 18972-56-0 19014-05-2 19093-20-0
 19379-90-9 19388-87-5 19578-81-5 19766-89-3 19819-98-8
 19870-74-7 20013-73-4 20018-09-1 20543-04-8 20545-92-0
 20662-57-1 20679-58-7 20834-59-7 20859-73-8, Aluminum
 phosphide (AlP) 21129-27-1 21145-77-7 21564-17-0 21757-82-4
 21834-92-4 22009-37-6 22205-45-4, Copper sulfide (Cu2S)
 22221-10-9 22248-79-9 22781-23-3 22882-89-9 22882-91-3
 22936-75-0 22981-54-0 23031-36-9 23495-12-7 23560-59-0
 23564-05-8 23726-92-3 23726-94-5 23787-90-8 24019-05-4
 24048-13-3 24111-17-9 24124-25-2 24291-45-0 24634-61-5
 24720-09-0 24851-98-7 25068-14-8 25155-18-4 25155-29-7
 25167-82-2 25225-10-9 25254-50-6 25265-71-8 25304-14-7
 25377-70-2 25628-84-6 25655-41-8 **25988-97-0**
 26002-80-2 **26062-79-3** 26172-55-4 26248-98-6
 26354-18-7 26530-03-0 26530-20-1 26545-49-3 26617-87-8
 26635-93-8 26781-23-7 27083-27-8 27176-87-0 27236-65-3
 27253-29-8 27323-41-7 27697-50-3 28069-74-1 28159-98-0
 28219-61-6 28302-36-5 28387-62-4 28434-00-6 28434-01-7
 28558-32-9 28645-51-4, Oxacycloheptadec-10-en-2-one
28728-61-2 28772-56-7 28777-01-7 28805-58-5
 29232-93-7 29350-73-0 29463-06-7 29873-30-1 29873-33-4
 29973-13-5 30007-47-7
 (bactericide combinations in detergents)
 IT 30388-01-3 30560-19-1 30772-79-3 **31075-24-8**
 31195-95-6 31218-83-4 31501-11-8 **31512-74-0**
 31906-04-4 32276-75-8 32289-58-0 32388-55-9 33089-61-1
 33704-61-9 33939-64-9 33972-49-5 34375-28-5 34395-72-7
 34413-35-9 34681-10-2 34911-46-1 35109-57-0 35206-70-3
 35285-68-8 35285-69-9 35367-38-5 35445-70-6 35554-44-0

35575-96-3 35691-65-7 35950-52-8 36059-35-5 36362-09-1
 36631-23-9 36734-19-7 37139-99-4 37228-06-1 37306-10-8,
 Chromium copper boride 38083-17-9 38260-54-7 38460-95-6D,
 10-Undecenoyl chloride, reaction products with protein hydrolyzates,
 potassium salts 38465-60-0 38664-03-8 38811-14-2 39236-46-9
 39300-45-3 39354-45-5 39515-40-7 39650-63-0,
 1H-Benzimidazole-2-pentanamine **39660-17-8** 39758-90-2
 40027-80-3 40188-41-8 40596-69-8 41096-46-2 41877-16-1
 42370-07-0 42436-34-0 42534-61-2 43143-11-9 44992-01-0
 46830-22-2 46917-07-1 50542-90-0 50650-76-5 51015-28-2
 51015-29-3 51026-28-9 51200-87-4 51566-62-2 51580-86-0
 51630-58-1 52299-20-4 52304-36-6 52315-07-8 52513-11-8
 52645-53-1 52684-21-6 52684-23-8 52918-63-5 53082-58-9
 53488-14-5 53720-80-2 53727-58-5 54262-78-1 54406-48-3
 54427-07-5, Copper boride 54464-57-2 54720-15-9 54779-21-4
 55142-08-0 55406-53-6 55566-30-8 55722-59-3 55965-84-9
 56073-07-5 56073-10-0 56148-34-6 56148-37-9 56148-40-4
 56289-76-0 56427-82-8 56709-13-8 56996-62-4, Glokill 77
 57006-76-5 57382-78-2 57413-95-3 57503-06-7 57520-17-9
 57576-09-7 57837-19-1 58206-95-4 58249-25-5 58769-20-3
 59323-76-1 59324-17-3 59355-53-2, Citrex S 5 60114-62-7D,
 1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco
 acyl derivs., inner salts 60168-88-9 60207-31-0 60207-90-1
 60239-68-1 60568-05-0 60736-58-5 60763-40-8 60784-31-8
 60812-23-9 61692-81-7 61692-84-0 61702-91-8 61842-86-2
 62476-84-0D, Guanidine, N,N'''-1,3-propanediylbis-, N-coco alkyl
 derivs., acetates 62755-21-9 63085-03-0 63333-35-7
 63500-71-0 63619-09-0 **63943-38-4** 64359-81-5
 64440-88-6 64628-44-0 64665-57-2 64988-06-3 65059-43-0
 65289-97-6 65289-98-7 65290-00-8 65400-98-8 65630-22-0
 65694-09-9 65733-16-6 65733-18-8 66062-78-0 66063-61-4
 66065-55-2D, Benzenemethanaminium, N-(3-aminopropyl)-N,N-dimethyl-,
 chloride, N-coco acyl derivs. 66091-24-5D, 1-Propanaminium,
 3-amino-N-ethyl-N,N-dimethyl-, N-lanolin acyl derivs., Et sulfates
 66204-44-2 66215-27-8 66789-18-2 66841-25-6 67100-72-5
 67171-34-0 67185-04-0 67228-83-5 67485-29-4 67508-69-4
 67633-95-8 67633-98-1 67633-99-2 67634-01-9 67634-12-2
 67634-14-4 67634-15-5 67634-25-7 67634-26-8 67747-09-5
 67772-01-4 67801-33-6 67801-44-9 67801-47-2 67845-46-9
 67846-68-8 68085-85-8 68134-42-9 68155-66-8 68155-67-9
 68188-98-7 68213-85-4 68224-19-1 68359-37-5 68480-15-9
 68480-16-0 68527-77-5 68527-84-4 68738-96-5 68797-57-9
 68890-66-4 68901-15-5 68929-85-1 68959-20-6 68991-96-8
 68991-97-9 69094-18-4 69153-35-1 70161-44-3 70680-04-5
 70680-05-6 70754-17-5 70775-75-6 70788-30-6 70799-70-1
 70862-65-6 71297-57-9 71297-58-0 71297-59-1 71646-36-1
 72089-08-8 72490-01-8 72963-72-5 73264-51-4 73337-96-9D,
 .beta.-Alanine, N-(2-aminoethyl)-N-(2-hydroxyethyl)-, N-C8-18-acyl
 derivs. 74774-67-7 75033-25-9 75147-23-8 76382-10-0D,
 .beta.-Alanine, N-(3-aminopropyl)-, N-coco alkyl derivs.
 76653-57-1 76653-58-2 76733-35-2 76749-58-1 76902-90-4
 77492-36-5 77492-37-6 77492-44-5 78144-21-5 78491-02-8

78587-05-0 79267-18-8 79267-19-9 79267-20-2 79267-21-3
 79267-22-4
 (bactericide combinations in detergents)
 IT 81335-77-5 81412-43-3, Tridemorph 81741-28-8 81786-73-4
 81786-74-5 81786-75-6 81867-37-0 82007-94-1 82432-76-6
 82432-77-7 82432-78-8 82633-79-2 82657-04-3 82790-32-7
 82790-35-0 82790-36-1 82790-38-3 82801-21-6 82801-25-0
 82801-26-1 82801-27-2 83145-28-2 83285-27-2 83601-71-2
 84030-30-8 84233-90-9 84233-92-1 84473-74-5 84631-78-7
 84643-53-8 85264-33-1 86115-11-9 86479-06-3 86880-59-3D,
 N-coco acyl derivs. 87118-95-4 88308-77-4 88558-41-2
 88995-31-7 89415-87-2 89960-92-9 90117-66-1 91326-34-0
 91465-08-6 92368-90-6 92585-24-5 93345-88-1 93345-89-2
 93345-90-5 93345-91-6 93345-92-7 93778-80-4 93839-34-0
 93856-82-7 93856-83-8 94005-95-5 94248-21-2 94313-91-4
 94361-06-5 94857-31-5 95737-68-1 96565-37-6 97331-89-0
 97331-92-5 97331-93-6 101463-69-8 102851-06-9 103055-07-8
 103298-77-7 103298-78-8 104063-25-4 104133-05-3 104653-34-1
 105024-66-6 105726-67-8 107534-96-3 107879-22-1 108080-74-6
 108166-32-1 108189-00-0 109780-03-2 109835-67-8 109835-68-9
 109835-69-0 111099-92-4 111099-93-5 111337-53-2 114955-18-9
 114955-19-0 114955-20-3 115044-19-4 116255-48-2 118712-89-3
 119515-20-7 119515-38-7 120068-37-3 120217-93-8 120217-94-9
 120983-64-4 121227-99-4 122538-65-2 122795-41-9 125116-23-6
 125770-49-2 125770-50-5 125770-51-6 126646-06-8 126646-07-9
 128275-31-0 136426-54-5 138261-41-3 138265-88-0, Boron zinc
 hydroxide oxide (B12Zn4(OH)14O15) 138416-95-2 138698-36-9
 140194-01-0, 1,1,3-Propanetricarboxaldehyde 140194-02-1
 144768-02-5 146919-78-0 149118-66-1 154194-73-7 154339-84-1,
 Silver sodium zirconium phosphate (Ag0.19Na0.47Zr2(HPO4)0.34(PO4)2.6
 6) 154339-85-2 173291-51-5 173423-45-5, Silver sodium
 zirconium phosphate (Ag0.44Na0.25Zr2(HPO4)0.3(PO4)2.7) 187615-12-9
 188739-94-8 191546-07-3 191546-08-4 199169-27-2 216770-11-5,
 Silver sodium zirconium phosphate (Ag0.05Na0.3Zr2(HPO4)0.65(PO4)2.35
) 251089-42-6 344931-17-5D, 1-Propanaminium,
 3-amino-N-[2-[(2-hydroxyethyl)amino]-2-oxoethyl]-N,N-dimethyl-,
 chloride, N-C16-18 acyl derivs. 351224-25-4 **351224-26-5**
 (bactericide combinations in detergents)

L76 ANSWER 8 OF 28 HCA COPYRIGHT 2002 ACS

132:344243 Influence of preservatives on conjunctival cells in vitro.
 Debbasch, Caroline; De Saint Jean, Magda; Pisella, Pierre-Jean; Rat,
 Patrice; Warnet, Jean-Michel; Baudouin, Christophe (Unite de
 Pharmacotoxicologie Cellulaire C.H.N.O. des XV-XX, Paris, 75012,
 Fr.). Journal of Toxicology, Cutaneous and Ocular Toxicology,
 19(1), 79-88 (English) 2000. CODEN: JTOTDO. ISSN: 0731-3829.
 Publisher: Marcel Dekker, Inc..

AB Benzalkonium chloride (BAC), which is widely used in ophthalmic
 preps. for its preservative properties, has been shown to cause
 conjunctival toxicity. The purpose of this study was to examine the
 effects of BAC on a continuous human conjunctival cell line (Wong
 Kilbourne-derived human conjunctiva). Cytotoxicity tests were

assessed according to ECVAM recommendations using microplate cold light cytofluorometry. Membrane integrity (neutral red test), DNA condensation (Hoechst 33342 test), mitochondrial activity (rhodamine 123 test), and reactive oxygen species (ROS) prodn. (dichlorofluorescein diacetate test) were evaluated directly on living cells treated with different concns. of BAC (0.00001-0.01%). Using the neutral red fluorescence, we obsd. a decrease in membrane integrity even at a very low concn. of BAC (0.00001%) and after a short time (15 min). A stimulation of ROS prodn. was obsd. at this concn., assocd. with chromatin condensation due to an apoptotic phenomenon. The apoptosis induced by benzalkonium chloride on conjunctival cells in vitro can explain some of the ocular surface damage caused by preservatives.

IT 7782-44-7D, Oxygen, reactive species, biological studies
(reactive oxygen species; influence of preservative benzalkonium chloride on conjunctival cells in vitro)

RN 7782-44-7 HCA

CN Oxygen (8CI, 9CI) (CA INDEX NAME)

O=O

CC 4-3 (Toxicology)
Section cross-reference(s): 1, 63

IT Quaternary ammonium compounds, biological studies
(alkylbenzyltrimethyl, chlorides; influence of preservative benzalkonium chloride on conjunctival cells in vitro)

IT 7782-44-7D, Oxygen, reactive species, biological studies
(reactive oxygen species; influence of preservative benzalkonium chloride on conjunctival cells in vitro)

L76 ANSWER 9 OF 28 HCA COPYRIGHT 2002 ACS

131:146048 Polymeric cleaning agents having low skin irritation and cleaning compositions therewith. Shiino, Tajiro; Waki, Kazunori; Nakabayashi, Nobuo; Ishihara, Kazuhiko (Nippon Oil and Fats Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 11217588 A2 19990810 Heisei, 16 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1998-23009 19980204.

AB Title cleaning agents, useful for fabric- or kitchen-cleaning compns. and shampoos, comprise polymers having side chains represented by the general formula of $OP(:O)(O-)(OR_4N+R_1R_2R_3)$ as active components, where $R_1-3 = H$ or C_1-8 alkyl and $R_4 = C_2-4$ alkylene. Thus, 2-methacryloyloxyethyl-2'-(trimethylammonio)ethyl phosphate and Bu methacrylate were polycond. to give a cleaning agent.

IT 67881-99-6P 125275-25-4P 182816-96-2P
(prepn. polymeric cleaning agents having low skin irritation)

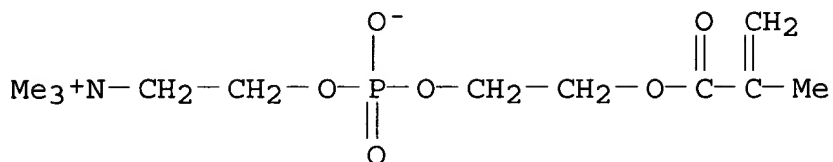
RN 67881-99-6 HCA

CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 67881-98-5

CMF C11 H22 N O6 P



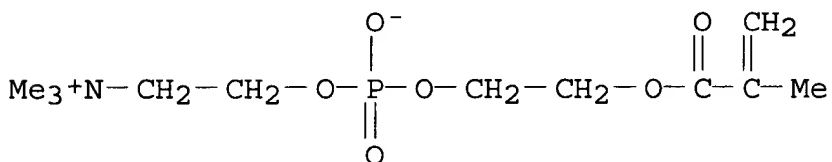
RN 125275-25-4 HCA

CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with butyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 67881-98-5

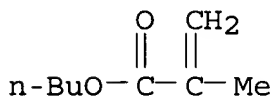
CMF C11 H22 N O6 P



CM 2

CRN 97-88-1

CMF C8 H14 O2



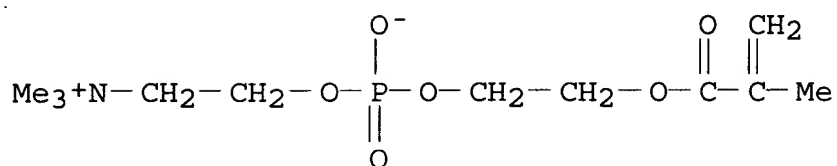
RN 182816-96-2 HCA

CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with 2-ethylhexyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

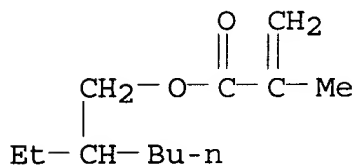
CRN 67881-98-5

CMF C11 H22 N O6 P



CM 2

CRN 688-84-6
CMF C12 H22 O2



IC ICM C11D003-37
ICS A61K007-075; A61K007-50; C11D007-36
CC 46-6 (Surface Active Agents and Detergents)
Section cross-reference(s): 40, 62
IT **67881-99-6P 125275-25-4P 182816-96-2P**
(prepn. polymeric cleaning agents having low skin irritation)

L76 ANSWER 10 OF 28 HCA COPYRIGHT 2002 ACS

130:333911 Toxicity evaluation of chemicals using mouse liver mitochondria. Inoue, Tatsuaki; Goto, Mayumi; Mihara, Yuichi; Yokota, Katsushi (Grad. Sch. Pharm. Sci., Tohoku Coll. Pharm., Sendai, 981-8558, Japan). Yosui to Haisui, 41(3), 218-223 (Japanese) 1999. CODEN: YOHAAP. ISSN: 0513-5907. Publisher: Sangyo Yosui Chosakai.

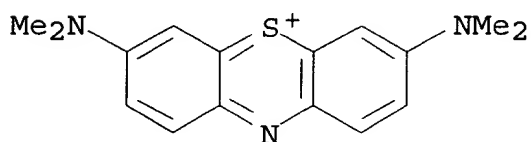
AB Toxicity of 19 phenols, 13 com. available disinfectants, 3 anionic surfactants, 9 dyes, 2 drugs and 1 agricultural chem. was assessed by inhibition of mitochondrial oxidative phosphorylation. Mitochondrial fraction was prepd. from the liver of male ddY mice. Respiratory control ratio (RCR) was detd. by dividing oxygen consumption speed in medium contg. succinate and ADP by that in the medium contg. succinate under various concns. of test compds., and 50% inhibition of RCR(RCR50) was calcd. RCR50 values were widely distributed from 0.6 mg/L of 2,4,4'-trichloro-2'-hydroxydiphenyl ether to 12,500 mg/L of paraquat. RCR50 values were generally lower than those of 50% inhibition of **oxygen** absorption with **activated** sludge (IC50), indicating that RCR50 was sensitive and useful tool for assessment of toxicity of chems.

IT 61-73-4, **Methylene blue** 548-62-9
, **Crystal violet** 569-64-2,
Malachite green

(toxicity evaluation of chems. using mouse liver mitochondria)

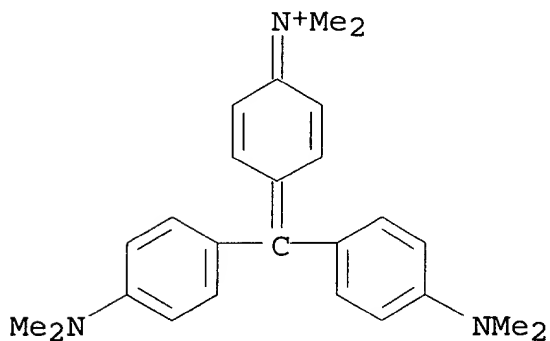
RN 61-73-4 HCA

CN Phenothiazin-5-ium, 3,7-bis(dimethylamino)-, chloride (9CI) (CA INDEX NAME)

● Cl⁻

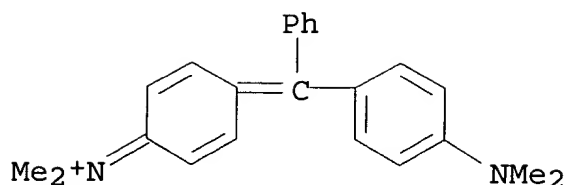
RN 548-62-9 HCA

CN Methanaminium, N-[4-[bis[4-(dimethylamino)phenyl]methylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, chloride (9CI) (CA INDEX NAME)

● Cl⁻

RN 569-64-2 HCA

CN Methanaminium, N-[4-[4-(dimethylamino)phenyl]phenylmethylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, chloride (9CI) (CA INDEX NAME)



● Cl⁻

CC 4-3 (Toxicology)

Section cross-reference(s): 1

IT **Quaternary ammonium** compounds, biological studies

(alkylbenzyl dimethyl, chlorides; toxicity evaluation of chems. using mouse liver mitochondria)

IT 51-28-5, 2,4-Dinitrophenol, biological studies **61-73-4**, **Methylene blue** 69-53-4, Ampicillin 72-57-1, Trypan blue 88-75-5, 2-Nitrophenol 95-48-7, 2-Methylphenol, biological studies 95-65-8, 3,4-Dimethylphenol 95-87-4, 2,5-Dimethylphenol 100-02-7, 4-Nitrophenol, biological studies 105-67-9, 2,4-Dimethylphenol 106-44-5, 4-Methylphenol, biological studies 108-39-4, 3-Methylphenol, biological studies 108-68-9, 3,5-Dimethylphenol 108-95-2, Phenol, biological studies 108-95-2D, Phenol, derivs., biological studies 111-30-8, Glutaral 314-13-6, Evans blue 329-71-5, 2,5-Dinitrophenol 467-63-0, Methylrosaniline 526-75-0, 2,3-Dimethylphenol 527-60-6, 2,4,6-Trimethylphenol 547-58-0, Methyl orange **548-62-9**, **Crystal violet** 554-84-7, 3-Nitrophenol **569-64-2**, **Malachite green** 573-56-8, 2,6-Dinitrophenol 576-26-1, 2,6-Dimethylphenol 632-99-5, Fuchsin 697-82-5, 2,3,5-Trimethylphenol 989-38-8, **Rhodamine 6G** 2381-85-3, Nile blue 2416-94-6, 2,3,6-Trimethylphenol 3380-34-5, 2,4,4'-Trichloro-2'-hydroxydiphenyl ether 4685-14-7, Paraquat 9003-39-8, Povidone 15686-71-2, Cephalexin 18472-51-0, Chlorhexidine gluconate 25155-30-0, Sodium laurylbenzenesulfonate (toxicity evaluation of chems. using mouse liver mitochondria)

L76 ANSWER 11 OF 28 HCA COPYRIGHT 2002 ACS

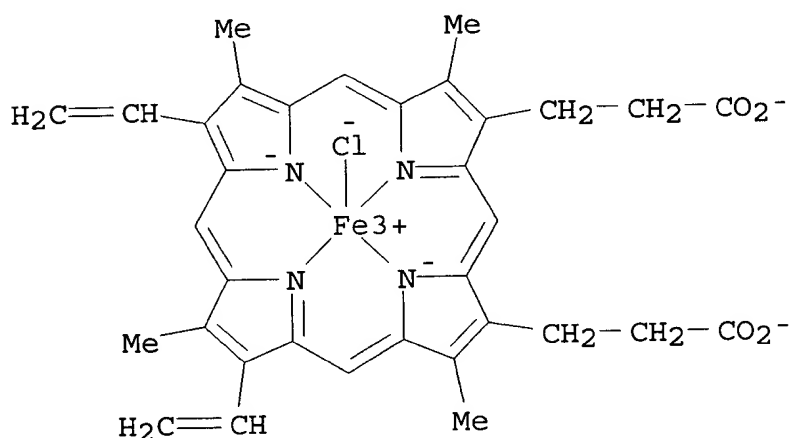
130:29221 Preparation of solid porous matrixes for pharmaceutical uses. Unger, Evan C. (ImaRx Pharmaceutical Corp., USA). PCT Int. Appl. WO 9851282 A1 19981119, 139 pp. DESIGNATED STATES: W: AU, BR, CA, CN, JP, KR, NZ; RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1998-US9570 19980512. PRIORITY: US 1997-46379 19970513.

AB A solid porous matrix formed from a surfactant, a solvent, and a bioactive agent is described. Thus, amphotericin nanoparticles were prep'd. by using ZrO₂ beads and a surfactant. The mixt. was milled

for 24 h.
 IT 7782-44-7, Oxygen, biological studies 16009-13-5,
Hemin
 (prepn. of solid porous matrixes for pharmaceutical uses)
 RN 7782-44-7 HCA
 CN Oxygen (8CI, 9CI) (CA INDEX NAME)

O=O

RN 16009-13-5 HCA
 CN Ferrate(2-), chloro[7,12-diethenyl-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-dipropanoato(4-)-.kappa.N21,.kappa.N22,.kappa.N23,.kappa.N24]-, dihydrogen, (SP-5-13)- (9CI) (CA INDEX NAME)



● 2 H⁺

IC ICM A61K009-10
 CC 63-6 (Pharmaceuticals)
 IT **Quaternary ammonium** compounds, biological studies
 (alkylbenzyl dimethyl, chlorides; prepn. of solid porous matrixes for pharmaceutical uses)
 IT 677-56-5, Propane-1,1,1,2,2,3-hexafluoro 678-26-2,
 Perfluoropentane 684-16-2, Hexafluoroacetone 685-63-2,
 Hexafluoro-1,3-butadiene 689-97-4, Vinyl acetylene 692-50-2,
 Hexafluoro-2-butyne 752-61-4, Digitalin 768-94-5, Amantadine
 818-92-8, 3-Fluoropropylene 846-50-4, Temazepam 921-13-1,
 Chlorodinitromethane 927-84-4, Trifluoromethyl peroxide
 928-45-0, Butyl nitrate 968-93-4, Testolactone 987-24-6,
 Betamethasone acetate 990-73-8, Fentanyl citrate 1070-11-7,
 Ethambutol hydrochloride 1119-94-4, Lauryltrimethylammonium
 bromide 1119-97-7, Myristyltrimethylammonium bromide 1172-18-5

1177-87-3, Dexamethasone acetate 1191-96-4, EthylCyclopropane
1306-06-5, Hydroxylapatite 1397-89-3, Amphotericin B 1400-61-9,
Nystatin 1404-04-2, Neomycin 1405-37-4, Capreomycin sulfate
1493-03-4, Difluoriodomethane 1597-82-6, Paramethasone acetate
1630-94-0, 1,1-DimethylCyclopropane 1691-13-0,
1,2-Difluoroethylene 1722-62-9, Mepivacaine hydrochloride
1759-88-2 1867-66-9, Ketamine hydrochloride 2022-85-7,
Flucytosine 2068-78-2, Vincristine sulfate 2314-97-8,
IodotriFluoromethane 2366-52-1, 1-Fluorobutane 2375-03-3,
Methylprednisolone sodium succinate 2392-39-4, Dexamethasone
sodium phosphate 2511-95-7, 1,2-DimethylCyclopropane 2551-62-4,
Sulfur hexafluoride 3116-76-5, Dicloxacillin 3385-03-3,
Flunisolide 3458-28-4, Mannose 3485-14-1, Cyclacillin
3511-16-8, Hetacillin 3529-04-2, Benzyl dimethylhexadecylammonium
bromide 3810-74-0, Streptomycin sulfate 3858-89-7,
Chloroprocaine hydrochloride 4185-80-2, Methotrimeprazine
hydrochloride 4428-95-9, Foscarnet 4431-00-9, Aurintricarboxylic
acid 4697-36-3, Carbenicillin 4786-20-3, Crotononitrile
4901-75-1, 3-Ethyl-3-methyldiaziridine 5534-09-8, Beclomethasone
dipropionate 5536-17-4, Arabinosyl adenine 5611-51-8,
Triamcinolone hexacetonide 5714-22-7, Sulfur fluoride (S2F10)
6000-74-4, Hydrocortisone sodium phosphate 7281-04-1,
Benzyl dimethyldodecylammonium bromide 7297-25-8, Erythritol
tetranitrate 7439-89-6, Iron, biological studies 7440-01-9,
Neon, biological studies 7440-06-4D, Platinum, compds., biological
studies 7440-15-5, Rhenium, biological studies 7440-24-6,
Strontium, biological studies 7440-26-8, Technetium, biological
studies 7440-48-4, Cobalt, biological studies 7440-63-3, Xenon,
biological studies 7440-65-5, Yttrium, biological studies
7601-55-0, Metocurine iodide 7637-07-2, biological studies
7647-14-5, Sodium chloride, biological studies 7681-14-3,
Prednisolone tebutate 7727-37-9, Nitrogen, biological studies
7728-73-6 7782-41-4, Fluorine, biological studies
7782-44-7, Oxygen, biological studies 7783-82-6, Tungsten
hexafluoride 9001-75-6, Pepsin 9001-78-9, Alkaline phosphatase
9002-01-1, Streptokinase 9002-04-4, Thrombin 9002-60-2,
Adrenocorticotrophic hormone, biological studies 9002-61-3
9002-72-6, Growth hormone 9002-79-3, Melanocyte stimulating
hormone 9002-89-5, Poly(vinyl alcohol) 9003-11-6 9003-39-8,
PVP 9004-10-8, Insulin, biological studies 9004-34-6, Cellulose,
biological studies 9004-54-0, Dextran, biological studies
9004-61-9, Hyaluronic acid 9004-67-5, Methyl Cellulose
9005-25-8, Starch, biological studies 9005-27-0, HETA-starch
9005-32-7, Alginic acid 9005-49-6, Heparin, biological studies
9005-64-5, Polyoxyethylene sorbitan monolaurate 9005-65-6,
Polyoxyethylene sorbitan monooleate 9005-66-7, Polyoxyethylene
sorbitan monopalmitate 9005-67-8, Polyoxyethylene sorbitan
monostearate 9005-71-4, Polyoxyethylene sorbitan tristearate
9007-12-9, Calcitonin 9007-92-5, Glucagon, biological studies
9011-14-7, PMMA 9011-97-6, Cholecystokinin 9015-68-3,
Asparaginase 9015-71-8, Corticotropin releasing factor
9036-19-5, Octoxynol 9039-53-6, Urokinase 9061-61-4, Nerve

growth factor 10024-97-2, Nitrogen oxide (N2O), biological studies
11000-17-2, Vasopressin 11056-06-7, Bleomycin 11096-26-7,
Erythropoietin 13264-41-0, Cetyldimethylethylammonium chloride
13292-46-1, Rifampin 13311-84-7, Flutamide 13647-35-3,
Trilostane 15500-66-0, Pancuronium bromide 15663-27-1, Cisplatin
15686-71-2, Cephalixin 15687-27-1, Ibuprofen 16009-13-5,
Hemin 16136-85-9 17598-65-1, Deslanoside 18010-40-7,
Bupivacaine hydrochloride 18323-44-9, Clindamycin 18378-89-7,
Plicamycin 18773-88-1, Benzyldimethyltetradecylammonium bromide
20187-55-7, Bendazac 20274-91-3 20830-75-5, Digoxin
21829-25-4, Nifedipine 22204-53-1, Naproxen 22494-42-4,
Diflunisal 22916-47-8, Miconazole 23110-15-8, Fumagillin
23541-50-6, Daunorubicin hydrochloride 24356-66-9 24764-97-4,
2-Bromobutyraldehyde 24991-23-9 25104-18-1, Polylysine
25151-81-9, Prostanic acid 25316-40-9, Adriamycin 25322-68-3
25322-68-3D, PEG, ethers 25322-69-4, Polypropylene glycol
25513-46-6, Polyglutamic acid 26023-30-3, Poly[oxy(1-methyl-2-oxo-
1,2-ethanediyl)] 26100-51-6, Poly(lactic acid) 26171-23-3,
Tolmetin 26780-50-7, Glycolide-lactide copolymer 26787-78-0,
Amoxicillin 26839-75-8, Timolol 28911-01-5, Triazolam
29121-60-6, Vaninolol 29767-20-2, Teniposide 30516-87-1,
Azidothymidine 31637-97-5, Etofibrate 33069-62-4, Taxol
33125-97-2, Etomidate 33419-42-0, Etoposide 33507-63-0,
Substance p 34077-87-7, Dichlorotrifluoroethane 34787-01-4,
Ticarcillin 36322-90-4 36637-19-1, Etidocaine hydrochloride
36791-04-5, Ribavirin 38000-06-5, Polylysine 38194-50-2,
Sulindac 38821-53-3, Cephadrine 39391-18-9, Cyclooxygenase
41575-94-4, Carboplatin 42399-41-7, Diltiazem 47141-42-4,
Levobunolol 50370-12-2, Cefadroxil 50402-72-7,
Piperidine-2,3,6-trimethyl 50700-72-6, Vecuronium bromide
50972-17-3, Bacampicillin 51264-14-3, Amsacrine 52205-73-9,
Estramustine phosphate sodium 52365-63-6, Dipivefrin 53045-71-9,
1-Pentene-3-bromo 53188-07-1, Trolox 53678-77-6,
Muramyl dipeptide 53994-73-3, Cefaclor 54965-24-1, Tamoxifen
citrate 55142-85-3, Ticlopidine 57223-18-4, 1-Nonen-3-yne
59277-89-3, Acyclovir 59467-96-8, Midazolam hydrochloride
60118-07-2, Endorphin 62031-54-3, Fibroblast growth factor
62229-50-9, Epidermal growth factor 62232-46-6, Bifemelane
hydrochloride 62571-86-2, Captopril 62683-29-8, Colony
stimulating factor 63659-18-7, Betaxolol 65277-42-1,
Ketoconazole 68302-57-8 68367-52-2, Sorbinil 69279-90-9,
Ansamitocin 72702-95-5, Ponalrestat 73218-79-8, Apraclonidine
hydrochloride 73984-11-9 74381-53-6, Leuprolide acetate
74790-08-2, Spiroplatin 75847-73-3, Enalapril 76547-98-3,
Lisinopril 77181-69-2, Sorivudine 80755-87-9 81486-22-8,
Nipradilol 82159-09-9, Epalrestat 82410-32-0, Ganciclovir
82964-04-3, Tolrestat 83869-56-1, Granulocyte macrophage colony
stimulating factor 86090-08-6, Angiostatin 88096-12-2
89149-10-0, 15-Deoxyspergualin 98023-09-7 99896-85-2
106956-32-5, Oncostatin M 113852-37-2, Cidofovir 116632-15-6,
1.2.3-Nonadecanetricarboxylic acid 2-hydroxytrimethylester
119813-10-4, Carzelesin 120279-96-1, Dorzolamide 120287-85-6D,

Cetrorelix, derivs. 121181-53-1, Filgrastim 124389-07-7,
 Muramyltripeptide 127464-60-2, Vascular endothelial growth factor
 127984-74-1, Somatuline 130209-82-4, Latanoprost 139639-23-9,
 Tissue plasminogen activator 141436-78-4, Protein kinase c
 143011-72-7, Granulocyte colony stimulating factor 148717-90-2,
 Squalamine

(prepn. of solid porous matrixes for pharmaceutical uses)..

L76 ANSWER 12 OF 28 HCA COPYRIGHT 2002 ACS

129:332060 Light-activated antimicrobial and antiviral fabric materials.
 Wilson, John E.; Bull, Christopher (Fibermark Inc, USA). U.S. US
 5830526 A 19981103, 22 pp., Division of U.S. Ser. No. 365,464.
 (English). CODEN: USXXAM. APPLICATION: US 1997-802710 19970219.
 PRIORITY: US 1994-365464 19941228.

AB A substrate such as a woven or nonwoven fabric contains a
 light-activated dye alone or in combination with addnl. conventional
 antimicrobial agents. The substrate (such as paper or fabric) is
 impregnated with a light-activated nonleachable dye having
 antimicrobial and/or antiviral characteristics. The dye is bound by
 a cationic or anionic binder such as a H2O sol. polymer or
 carrageenan. Upon exposure to normal light, the dye generates
singlet O that kills microorganisms and viruses.
 Thus, air-laid nonwoven cellulose fabric treated with **Rose**
Bengal in Darathane WB 4000 (urethane binder) and dried,
 after 1 h exposure to light (2000 ft-candles) killed 99% of the
 microorganism *Staphylococcus aureus*.

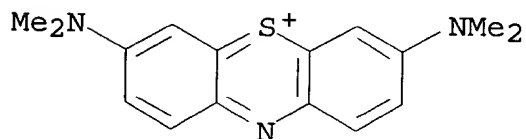
IT 61-73-4, **Methylene blue**

11121-48-5, **Rose Bengal**

(light-activated antimicrobial and antiviral dye
 materials for fabrics)

RN 61-73-4 HCA

CN Phenothiazin-5-ium, 3,7-bis(dimethylamino)-, chloride (9CI) (CA
 INDEX NAME)



● Cl⁻

RN 11121-48-5 HCA

CN Rose Bengal (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

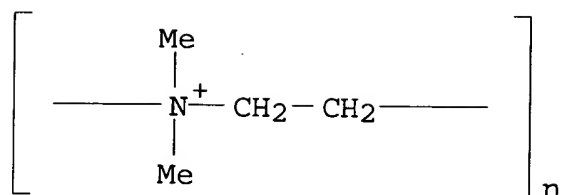
IC ICM B05D003-02

ICS B05D003-12; B05D005-00

NCL 427002100

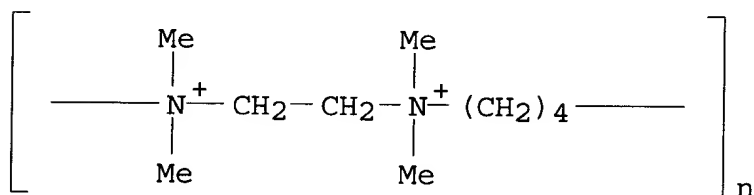
CC 40-6 (Textiles and Fibers)

- ST antiviral dyed nonwoven fabric; antibacterial dyed nonwoven fabric; **Rose Bengal** dyed nonwoven fabric; woven fabric dyed antibacterial; cellulosic fabric dyed antibacterial; anionic dyed nonwoven fabric; cationic dyed nonwoven fabric
- IT **Quaternary ammonium** compounds, uses
(chlorides, dye binder; light-activated antimicrobial and antiviral fabric materials)
- IT **61-73-4, Methylene blue** 92-31-9,
Toluidine Blue O 581-64-6, Thionin 11121-48-5,
Rose Bengal
(light-activated antimicrobial and antiviral dye materials for fabrics)
- L76 ANSWER 13 OF 28 HCA COPYRIGHT 2002 ACS
- 124:355942 Photo-oxidation of sodium sulfide by sulfonated phthalocyanines in oxygen-saturated aqueous solutions containing detergents or latexes. Spiller, Wolfgang; Woehrle, Dieter; Schulz-Ekloff, Guenter; Ford, Warren T.; Schneider, Gerhard; Stark, Johannes (Universitaet Bremen, Institut fuer Organische und Makromolekulare Chemie, Fachbereich 2, NW II, P.O. Box 330 440, 28334, Bremen, Germany). Journal of Photochemistry and Photobiology, A: Chemistry, 95(2), 161-73 (English) 1996. CODEN: JPPCEJ. ISSN: 1010-6030. Publisher: Elsevier.
- AB The water-sol. zinc and aluminum complexes and the metal-free deriv. of tetrasulfophthalocyanine were employed as sensitizers for the photo-oxidn. of sodium sulfide under irradiation with visible light in oxygen-satd. aq. alk. solns. contg. oppositely charged micelles or latex particles. With all photosensitizers the oxidn. process was strongly enhanced upon irradiation, and sulfate was the final oxidn. product. Autoxidn. as well as **singlet oxygen** and hydrogen peroxide formed during the photoreaction contribute to the complex overall process. The initial step is dominated by energy transfer. In contrast, Co(II)-tetrasulfophthalocyanine exhibits catalytic activity in the dark, and no pronounced addnl. activity under irradiation, with the formation of thiosulfate as oxidn. product. In this case an electron transfer mechanism occurs according to known results. Detergents strongly increase the photoactivity of sensitizers with high aggregation tendency (e.g. Zn(II)-tetrasulfophthalocyanine) by stabilizing monomeric dispersions and accumulating oxygen and the substrate. Latexes increase the photoactivity and simultaneously the photodegradation of the sensitizer, caused by high local accumulation of the sensitizer and consequently also 102. Al(III)-tetrasulfophthalocyanine, exhibiting a low aggregation tendency in strongly alk. solns., shows high photoactivity and photostability even without detergent.
- IT **28728-59-8 32077-11-5, 2,4-Ionene**
52270-19-6
(photooxidn. of sodium sulfide by sulfonated phthalocyanines in oxygen-satd. aq. solns. contg. detergents or latexes)
- RN **28728-59-8 HCA**
- CN Poly[(dimethyliminio)-1,2-ethanediyl bromide] (9CI) (CA INDEX NAME)



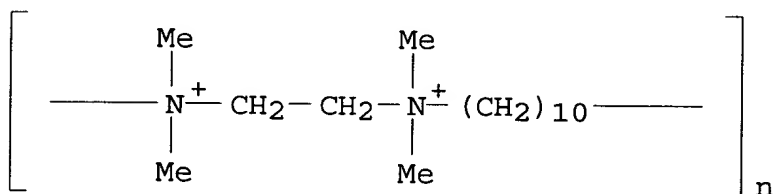
● Br⁻

RN 32077-11-5 HCA
 CN Poly[(dimethyliminio)-1,2-ethanediyl(dimethyliminio)-1,4-butanediyl
 dibromide] (9CI) (CA INDEX NAME)



● 2 Br⁻

RN 52270-19-6 HCA
 CN Poly[(dimethyliminio)-1,2-ethanediyl(dimethyliminio)-1,10-decanediyl
 dibromide] (9CI) (CA INDEX NAME)



● 2 Br⁻

CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic and
 Other Reprographic Processes)
 IT 57-09-0, CTAB 112-02-7, CTAC 9002-93-1, Triton X-100
 28728-59-8 32077-11-5, 2,4-Ionene 51241-17-9,
 Poly[(vinylbenzyl)-triethylammonium chloride] 52270-19-6

(photooxidn. of sodium sulfide by sulfonated phthalocyanines in oxygen-satd. aq. solns. contg. detergents or latexes)

L76 ANSWER 14 OF 28 HCA COPYRIGHT 2002 ACS

124:97750 Sustained-release pharmaceutical system for the delivery of antioxidants. Friedman, Michael; Kohen, Ron (Yisum Research Development Co., Israel; Kohn, Kenneth, I.). PCT Int. Appl. WO 9529666 A1 19951109, 20 pp. DESIGNATED STATES: W: AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, JP, KG, KP, KR, KZ, LK, LR, LT, LV, MD, MG, MN, MX, NO, NZ, PL, RO, RU, SI, SK, TJ, TT, UA, US, UZ, VN; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1995-US5504 19950503. PRIORITY: IL 1994-109539 19940503.

AB A sustained-release pharmaceutical delivery system for the administration of an antioxidant drug to a patient in need of such drug is disclosed, wherein said delivery system comprises said drug in combination with a polymeric matrix and said matrix comprising a polymer which does not interact with said drug or a mixt. of such polymers. The pharmaceutical delivery system of the invention is useful for the treatment of pathol. conditions involving pathol. increased formation of **active oxygen** species. Et cellulose (I) was dissolved in EtOH followed by dissoln. of .alpha.-tocopherol (II) to obtain a 6% soln. of II. Films were cast by pouring the ethanolic soln. onto glass plates and allowing the solvent to evap. at room temp., the resulting film were then removed from the glass plates to obtain sustained-release films having thickness of 30.mu.m and contg. 30% I and 70% II.

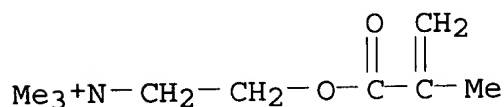
IT **33434-24-1**, Eudragit rl
(sustained-release pharmaceutical system for the delivery of antioxidants)

RN 33434-24-1 HCA
CN Ethanaminium, N,N,N-trimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]-, chloride, polymer with ethyl 2-propenoate and methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 5039-78-1

CMF C9 H18 N O2 . Cl

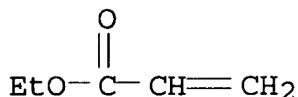


Cl⁻

CM 2

CRN 140-88-5

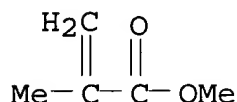
CMF C5 H8 O2



CM 3

CRN 80-62-6

CMF C5 H8 O2



IC ICM A61K009-22

CC 63-6 (Pharmaceuticals)

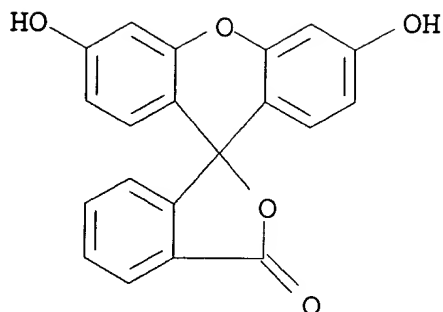
IT 50-81-7, Ascorbic acid, biological studies 58-95-7,
 D-.alpha.-Tocopherol acetate 59-02-9, .alpha.-Tocopherol
 1406-18-4, Vitamin e 4345-03-3, D-.alpha.-Tocopherol succinate
 7235-40-7; .beta.,.beta.-Carotene 7782-49-2, Selenium, biological
 studies 9000-01-5, Gum arabic 9003-07-0, Polypropylene
 9004-57-3, Ethyl cellulose 9004-64-2, Hydroxypropyl cellulose
 9004-65-3, Hydroxypropyl methyl cellulose 25322-68-3
33434-24-1, Eudragit rl
 (sustained-release pharmaceutical system for the delivery of
 antioxidants)

L76 ANSWER 15 OF 28 HCA COPYRIGHT 2002 ACS

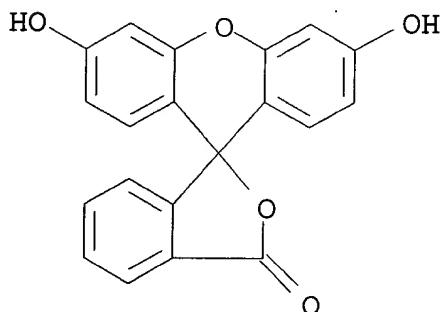
123:316861 The effect of polycation on the light fastness of CI Acid Red
 249. Oka, Hidetaka; Kimura, Akira (Ciba Geigy Japan Ltd,
 Takarazuka, 665, Japan). Journal of the Society of Dyers and
 Colourists, 111(10), 311-15 (English) 1995. CODEN: JSDCAA. ISSN:
 0037-9859. Publisher: Society of Dyers and Colourists.

AB Cationic compds. are frequently used in direct dyeing processes and
 in ink-jet printing as dye-fixing agents. In some cases, however,
 they can reduced the light fastness of C.I. Acid Red 249, an anionic
 2-phenylazo-1-naphthol dye in aq. solns. and in PVA films. As a
 comparison, the much smaller ammonium cation was used, which had no
 observable effect on hue or dye light fastness. However, some
 changes to the dye's phys. pros were obsd. The effect of the
 polycation is explained as a consequence of dye aggregation
 facilitated by presence of polycation. Self-sensitized
singlet oxygen seemed to play no part in dye
 photofading, but other oxygen species could participate in the
 process.

- IT 92769-10-3, Polyfix 601
(the effect of polycation on the light fastness of CI Acid Red 249 and 2-phenylazo-1-naphthol dye in aq. solns. and polymer films)
- RN 92769-10-3 HCA
- CC 41-3 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
- IT 92769-10-3, Polyfix 601 110507-15-8, PAA-HCL 3S
(the effect of polycation on the light fastness of CI Acid Red 249 and 2-phenylazo-1-naphthol dye in aq. solns. and polymer films)
- L76 ANSWER 16 OF 28 HCA COPYRIGHT 2002 ACS
- 123:164638 Activation of polyanionic fluorescent dyes in low dielectric media with quaternary onium compounds in optical sensor. Munkholm, Christiane (Ciba Corning Diagnostics Corp., USA). U.S. US 5387525 A 19950207, 20 pp. (English). CODEN: USXXAM. APPLICATION: US 1993-116436 19930903.
- AB Fluorescence of polyanionic fluorophores in low dielec. media is activated by specific quaternary onium compds. When used in a low-dielec. polymer coating, the fluorophore/onium compd. system can function as a fluorescent optical sensor material for analytes (e.g. CO₂, O₂) which can permeate the coating and modulate the fluorescence in a specific manner. Thus, 2 mL 10% soln. of methacrylamidopropyltrimethylammonium chloride in 95% EtOH was mixed with 0.1 mL 10-5M hydroxypyrenetrisulfonic acid soln. in EtOH to provide an intensely fluorescent soln. which was dried on a silanized glass coverslip. The fluorescence was quenched concn. dependently by CO₂.
- IT 7782-44-7, Oxygen, analysis
(activation of polyanionic fluorescent dyes in low dielec. media with quaternary onium compds. in optical sensor)
- RN 7782-44-7 HCA
- CN Oxygen (8CI, 9CI) (CA INDEX NAME)
- O=O
- IT 2321-07-5, Fluorescein 2321-07-5D, Fluorescein, derivs.
(activation of polyanionic fluorescent dyes in low dielec. media with quaternary onium compds. in optical sensor)
- RN 2321-07-5 HCA
- CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 3',6'-dihydroxy-(9CI) (CA INDEX NAME)



RN 2321-07-5 HCA
 CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 3',6'-dihydroxy-
 (9CI) (CA INDEX NAME)



IC ICM G01N033-00
 NCL 436111000
 CC 9-1 (Biochemical Methods)
 Section cross-reference(s): 79
 ST fluorescent dye sensor oxygen carbon dioxide; **quaternary ammonium** polymer onium compd sensor
 IT 124-38-9, Carbon dioxide, analysis **7782-44-7, Oxygen**, analysis
 (activation of polyanionic fluorescent dyes in low dielec. media with quaternary onium compds. in optical sensor)
 IT 75-59-2, Tetramethylammonium hydroxide 77-98-5, Tetraethylammonium hydroxide 100-85-6, Benzyltrimethylammonium hydroxide 122-08-7, Benzyltrimethylammonium methoxide 129-00-0D, Pyrene, sulfonated derivs. 505-86-2, Hexadecyltrimethylammonium hydroxide 2052-49-5, Tetrabutylammonium hydroxide **2321-07-5, Fluorescein 2321-07-5D, Fluorescein**, derivs. 2877-24-9, Trimethylpropylammonium chloride 51410-72-1 74998-39-3, Pyrenetetrasulfonic acid 153967-03-4, Seminaphthofluorescein 153967-03-4D, Seminaphthofluorescein, derivs. 153967-04-5D, Seminaphthorhodafluor, derivs. 167160-47-6 167160-48-7 167426-61-1, Pyrenetrisulfonic acid 167426-61-1D, Pyrenetrisulfonic acid, hydrazides 167426-70-2 167426-71-3 167426-72-4 167426-73-5

(activation of polyanionic fluorescent dyes in low dielec. media with quaternary onium compds. in optical sensor)

L76 ANSWER 17 OF 28 HCA COPYRIGHT 2002 ACS

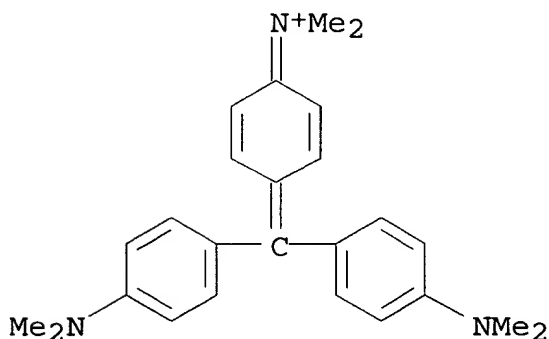
123:64832 Effects of various disinfectants on **oxygen** uptake of **activated** sludge microorganisms. Hagioita, Katsue; Mihara, Yuichi; Goto, Mayumi; Yokota, Katsushi; Ishida, Mami (1st Dep. Hyg. Chem., Tohoku Coll. Pharm., Sendai, 981, Japan). Japanese Journal of Toxicology and Environmental Health, 41(2), 172-7 (Japanese) 1995. CODEN: JJTHEC. ISSN: 0013-273X.

AB The effects were described of various disinfectants on the O uptake rate (OUR) of activated sludge (AS). The in-vitro inhibitory effects STERIHIDE, HYAMINE-T, ISODINE, and HYPAL No. 20, on OUR of 2 kinds (AS-A; fish-cake processing wastewater and AS-B; local municipal sewage) of AS were detd. The IC50 values of 33 kinds of typical disinfectants were measured for AS-A, resp. GRINCE (0.3% Irgasan DP 300) and Irgasan DP 300 alone inhibited most strongly by the IC50 values of 6 mg/L, resp., and followed by cetylpyridinium chloride (20 mg/L), OSVAN (58 mg/L), HYAMIE-T (58 mg/L), KMnO4 (60 mg/L), Thimerosal (65 mg/L) and benzethonium chloride (80 mg/L). PhOH, saponated cresol, resorcin, AgNO3, medical soap, Bronopol, and Acrinol, showed IC50 value of >1,000 mg/L. The toxic effects on OUR of AS in the presence of an equiv. mixt. of 2 disinfectants tend to become stronger than that of the disinfectant alone. Namely, the additive effects of OUR-inhibition seemed to exist.

IT **548-62-9**, Methylosaniline chloride
(disinfectant; effects of disinfectants on **oxygen** uptake of **activated** sludge microorganisms in wastewater treatment)

RN 548-62-9 HCA

CN Methanaminium, N-[4-[bis[4-(dimethylamino)phenyl]methylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, chloride (9CI) (CA INDEX NAME)



Cl⁻

IT **7782-44-7**, Oxygen, biological studies

(effects of disinfectants on **oxygen** uptake of
activated sludge microorganisms in wastewater treatment)

RN 7782-44-7 HCA

CN Oxygen (8CI, 9CI) (CA INDEX NAME)

O=O

CC 60-1 (Waste Treatment and Disposal)

Section cross-reference(s): 10

ST **activated** sludge **oxygen** uptake disinfectant;
wastewater treatment **activated** sludge toxicity; toxicity
disinfectant **activated** sludge

IT Bactericides, Disinfectants, and Antiseptics
(effects of disinfectants on **oxygen** uptake of
activated sludge microorganisms in wastewater treatment)

IT Wastewater treatment
(activated-sludge process, effects of disinfectants on
oxygen uptake of **activated** sludge
microorganisms in wastewater treatment)

IT **Quaternary ammonium** compounds, biological
studies
(alkylbenzyltrimethyl, chlorides, disinfectant; effects of
disinfectants on **oxygen** uptake of **activated**
sludge microorganisms in wastewater treatment)

IT 50-00-0, Formaldehyde, biological studies 52-51-7, Bronopol
54-64-8, Thimerosal 64-17-5, Ethanol, biological studies
67-63-0, Isopropanol, biological studies 108-46-3, Resorcin,
biological studies 108-95-2, Phenol, biological studies
111-30-8, Sterihyde 121-54-0, Benzethonium chloride 123-03-5,
Cetylpyridinium chloride 151-21-3, Sodium lauryl sulfate,
biological studies **548-62-9**, Methylrosaniline chloride
1319-77-3D, Cresol, saponated 1330-43-4, Sodium borate
1837-57-6, Acrinol 3380-34-5, Irgasan DP 300 7553-56-2, Iodine,
biological studies 7681-52-9, Sodium hypochlorite 7722-64-7,
Potassium permanganate 7761-88-8, Silver nitrate, biological
studies 10043-35-3, Boric acid, biological studies 18472-51-0,
Hibitane 25655-41-8, Povidone iodine 39362-38-4, Hyamine
51312-43-7, Tego 51 160903-16-2, Hypal 20
(disinfectant; effects of disinfectants on **oxygen**
uptake of **activated** sludge microorganisms in wastewater
treatment)

IT **7782-44-7**, Oxygen, biological studies
(effects of disinfectants on **oxygen** uptake of
activated sludge microorganisms in wastewater treatment)

L76 ANSWER 18 OF 28 HCA COPYRIGHT 2002 ACS
120:79423 Properties of differently charged micelles containing
rose bengal: application in photosensitization
studies. Bilski, Piotr; Chignell, Colin F. (Laboratory of Molecular
Biophysics, National Institute of Environmental Health Sciences,
P.O. Box 12233, Research Triangle Park, NC 27709, USA). Journal of

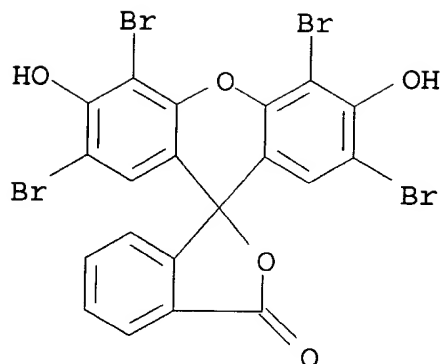
Photochemistry and Photobiology, A: Chemistry, 77(1), 49-58
(English) 1994. CODEN: JPPCEJ. ISSN: 1010-6030.

AB The authors studied **rose bengal** (I) in micelles carrying a pos. charge [cetylpyridinium chloride (II) and benzalkonium chloridel], a neutral charge (Triton X-100), a zwitterionic charge (SB12), and a neg. charge (mixt. of SB12 and SDS). Spectral changes during I titrn. with surfactant in aq. soln. allowed measurement of the aggregation nos. of micelles hosting I, and to est. the crit. micelle concns. (cmc) of the surfactants. The aggregation nos. were 37 for II, 41 for SB12, 48 for Triton X-100, and 52 for mixed (6:4) SDS-SB12 micelles, and the resp. cmc were 0.22, 2.88, 0.3, and 0.5 mM. From its spectral properties in all the micelles studied, the I mol. was situated in hydrophobic micellar regions rather than adsorbed at the micellar surface. The micellar location of I was also confirmed by quenching studies of I fluorescence using the pyrogallol moiety, which was located outside the micelles (gallic acid), dissolved/adsorbed in the micelles (pyrogallol), or sited at the micellar interface (lauryl gallate). Lauryl gallate did not quench I fluorescence efficiently despite the location of the pyrogallol moiety at the micellar interface. In contrast, lauryl gallate was an efficient quencher of I fluorescence in homogeneous soln. Irresp. of the micelle charge, micellar I was more resistant to photobleaching than "free" I and produced **singlet oxygen** efficiently. In cationic micelles I was insensitive to acidic pH, which could extend the usefulness of the dye as a 102 generator to acidic aq. solns. (pH 1.5-5) where "free" I formed a colorless lactam. I located in micelles bearing different charges could prove useful for studying 102 reactions in the aq. phase while the I triplet state remained sequestered in the micelles.

IT 17372-87-1, Eosin
(fluorescence quenching of, in micelles)

RN 17372-87-1 HCA

CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one,
2',4',5',7'-tetrabromo-3',6'-dihydroxy-, disodium salt (9CI) (CA
INDEX NAME)



●2 Na

IT 11121-48-5, **Rose bengal**
 (photosensitization properties of, in micelles)
 RN 11121-48-5 HCA
 CN Rose Bengal (9CI) (CA INDEX NAME)
 *** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
 IT 7782-44-7P, **Oxygen**, preparation
 (singlet, prodn. of, by **rose bengal**
 in micelles)
 RN 7782-44-7 HCA
 CN Oxygen (8CI, 9CI) (CA INDEX NAME)

O=O

CC 41-5 (Dyes, Organic Pigments, Fluorescent Brighteners, and
 Photographic Sensitizers)
 Section cross-reference(s): 46
 ST **rose bengal** micelle photosensitization
 IT Micelles
 (charge of, photosensitization by **rose bengal**
 in relation to)
 IT Oxidation, photochemical
 (of furfuryl alc., in presence of **rose bengal**
 , micelle effect on)
 IT Fluorescence quenching
 (of **rose bengal** and eosin, micelle effect on)
 IT **Quaternary ammonium** compounds, miscellaneous
 (alkylbenzyltrimethyl, chlorides, micelles, **rose**
bengal photosensitization properties in)
 IT Surfactants
 (anionic, micelles, **rose bengal**
 photosensitization properties in)
 IT Surfactants

- (cationic, micelles, **rose bengal** photosensitization properties in)
- IT Surfactants
 - (nonionic, micelles, **rose bengal** photosensitization properties in)
- IT Energy level transition
 - (photo-, of **rose bengal**, micelle effect on)
- IT Surfactants
 - (zwitterionic, micelles, **rose bengal** photosensitization properties in)
- IT 17372-87-1, Eosin
 - (fluorescence quenching of, in micelles)
- IT 87-66-1, Pyrogallol 1166-52-5, Lauryl gallate
 - (micelles contg., **rose bengal** photosensitization properties in)
- IT 149-91-7, Gallic acid, miscellaneous
 - (micelles contg., **rose bengal** photosensitization properties in)
- IT 123-03-5, Cetylpyridinium chloride 9002-93-1, Triton X-100 14933-08-5, SB12
 - (micelles, **rose bengal** photosensitization properties in)
- IT 151-21-3, SDS, miscellaneous
 - (micelles, **rose bengal** photosensitization properties in)
- IT 98-00-0, Furfuryl alcohol
 - (photooxidn. of, in presence of **rose bengal**, micelle effect on)
- IT 11121-48-5, **Rose bengal**
 - (photosensitization properties of, in micelles)
- IT 7782-44-7P, **Oxygen**, preparation
 - (singlet, prodn. of, by **rose bengal** in micelles)

L76 ANSWER 19 OF 28 HCA COPYRIGHT 2002 ACS

115:269534 Configuration fiber-optic gas sensor bundle and method of making it. Yim, Jeffrey B.; Hubbard, Todd W.; Melkerson, Lori D.; Sexton, Michael A.; Fieggen, Bruce M. (Abbott Laboratories, USA). U.S. US 5047627 A 19910910, 13 pp. (English). CODEN: USXXAM. APPLICATION: US 1990-526185 19900518.

AB A bundle of fiber-optic sensors that resist breakage, for use in measuring pH, CO₂, and O₂ concn. and a method of making them, are described, where 3 optical fibers are enclosed in a common polyimide sheath and extend parallel to one another toward a distal end of the sensor, where they are bonded together in a mutually supportive array. At the distal end of one of these optical fibers is disposed a pellet comprising a CO₂ analyte indicator mol. codissolved within a polymer matrix. A thin reflective surface of Au foil is provided on the pellet such that incident light transmitted through the optical fiber and polymer matrix is reflected back into the optical fiber. The CO₂ **polymer** matrix absorbs light of a given wavelength to an extent dependent upon the level of CO₂

present. Similarly, on the distal end of a 2nd optical fiber is disposed a pH pellet comprising a pH analyte indicator matrix with a thin reflective Au foil attached for reflecting light that has passed through the pH analyte indicator matrix back into the optical fiber. The pH analyte indicator matrix absorbs light of a given wavelength to an extent dependent upon the H⁺ concn. (pH level) of a surrounding fluid. The 3rd optical fiber is used for measuring O₂ concn. An O₂ indicator matrix covers the distal ends of .gtoreq.2 of the 3 optical fibers: however, at least a portion of the pH optical fiber and the pH pellet are free of the O₂ indicator matrix, which is hydrophobic. The O indicator matrix phosphoresces for an interval of time that decreases in proportion to the surrounding O gas concn. The phosphorescent and reflected light signals are transmitted to light detectors through the optical fibers for comparison to ref. signals, so that the analyte concn. can be detd. Possible application to physiol. pH and blood gas concns. is indicated.

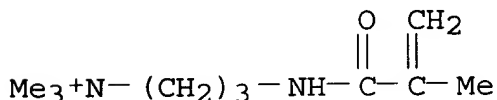
IT 7782-44-7, Oxygen, analysis
 (detn. of, fiber-optic gas sensor bundle for)
 RN 7782-44-7 HCA
 CN Oxygen (8CI, 9CI) (CA INDEX NAME)

O=O

IT 99581-76-7
 (fiber-optic gas sensor bundle contg.)
 RN 99581-76-7 HCA
 CN 1-Propanaminium, N,N,N-trimethyl-3-[(2-methyl-1-oxo-2-propenyl)amino]-, chloride, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

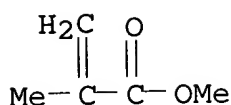
CRN 51410-72-1
 CMF C10 H21 N2 O . Cl



● Cl⁻

CM 2

CRN 80-62-6
 CMF C5 H8 O2



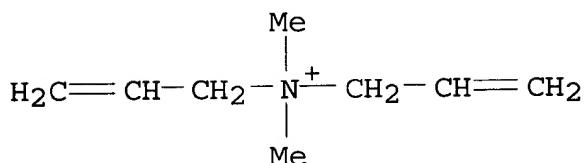
- IC ICM G01N033-48
ICS A61B005-00
- NCL 250227230
- CC 79-2 (Inorganic Analytical Chemistry)
- IT 124-38-9, Carbon dioxide, analysis **7782-44-7**, Oxygen, analysis
(detn. of, fiber-optic gas sensor bundle for)
- IT 143-74-8, Phenol red 144-55-8, Sodium bicarbonate, analysis
7440-57-5, Gold, uses and miscellaneous 13472-00-9 61798-01-4
99581-76-7
(fiber-optic gas sensor bundle contg.)
- L76 ANSWER 20 OF 28 HCA COPYRIGHT 2002 ACS
- 110:138678 Coprecipitated hydrogels in pressure-tolerant gas-diffusion electrodes. Gordon, Arnold Z.; Yeager, Ernest B.; Tryk, Donald S.; Hossain, M. Sohrab (Gould, Inc., USA). PCT Int. Appl. WO 8806646 A1 19880907, 36 pp. DESIGNATED STATES: W: JP, US; RW: DE, FR, GB. (English). CODEN: PIXXD2. APPLICATION: WO 1988-US625 19880302. PRIORITY: US 1987-20746 19870302.
- AB A gas-diffusion electrode, for a gas-generating or consuming electrochem. cell using an aq. alk. electrolyte, comprises an electronically conductive and electrochem. active porous body defining resp. gas- and electrolyte-contacting surfaces, and a substantially gas impermeable layer covering substantially the entire electrolyte-contacting surface. The layer comprises an electrolyte-insol., ionically conductive hydrophilic ionomeric hydrogel formed on the electrolyte-contacting surface in situ by independent application of resp. solns. of at least 1st and 2nd precursor polymers in solvents in which the hydrogel is insol. The 1st precursor polymer contains cationic groups and the 2nd precursor polymer contains anionic or nonionic polar groups. The 1st precursor polymer comprises poly(diallyldimethylammonium chloride) and the 2nd precursor polymer comprises poly(styrenesulfonic acid) or perfluorosulfonic acid polymer. The ratio of no. of equiv. of the 1st to the 2nd precursor polymer is (3-100):1. The porous body is a laminate of a porous hydrophobic layer defining the gas-contacting surface, and a porous active layer defining the electrolyte-contacting surface, the active layer comprising C and Co tetra(p-methoxyphenyl)porphyrin. A series of O redn. polarization curves for the invention electrodes is given. Very great increases in c.d. were available with only minor increases in the potential driving force over a wide range of c.ds.
- IT **26062-79-3D**, poly(styrenesulfonic acid) complex
(electrodes contg. layer of, oxygen-cobalt tetra(p-methoxyphenyl)porphyrin catalytic)
- RN 26062-79-3 HCA

CN 2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride,
homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 7398-69-8

CMF C8 H16 N . Cl



● Cl⁻

IC ICM C25B009-00
ICS C25B011-04; C25B011-06; C25B013-04; C25B013-08; H01M004-86;
H01M004-90; H01M004-96
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38
IT Reduction, electrochemical
(of **oxygen**, at electrodes with **active** layers
contg. cobalt tetra(p-methoxyphenyl)porphyrin and
poly(diallyldimethylammonium chloride)-poly(styrenesulfonic acid)
complex)
IT **26062-79-3D**, poly(styrenesulfonic acid) complex
50851-57-5D, poly(diallyldimethylammonium chloride) complex
(electrodes contg. layer of, oxygen-cobalt tetra(p-methoxyphenyl)
porphyrin catalytic)

L76 ANSWER 21 OF 28 HCA COPYRIGHT 2002 ACS

109:206529 Exploring relationships between mutagenic and carcinogenic
potencies. Piegorsch, Walter W.; Hoel, David G. (Div. Biometry Risk
Assess., Natl. Inst. Environ. Health Sci., Research Triangle Park,
NC, 27709, USA). Mutation Research, 196(2), 161-75 (English) 1988.
CODEN: MUREAV. ISSN: 0027-5107.

AB Salmonella mutagenic and rodent carcinogenic potencies are calcd.
for 112 compds. recently studied by the U.S. National Toxicol.
Program. Twenty-eight of 112 compds. are seen to exhibit
simultaneous nonzero mutagenic and carcinogenic potencies. These
are combined with an earlier list of mutagenic and carcinogenic
compds. to study possible trends in the data. A significant pos.
correlation is exhibited between mutagenic and carcinogenic
potencies in the combined data, although the obsd. scatter is too
great for the overall result to be predictive. Classification by
chem. class further indicates pos. correlations near one for chems.
classified as nitroarom. and related compds. Patterns in mutagenic

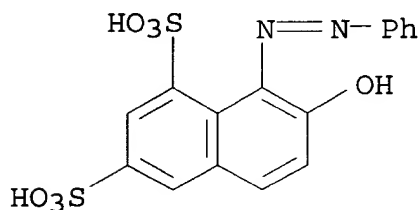
and carcinogenic potency over time are also examd. Mean potencies of recently studied compds. are seen to trend lower than those of compds. studied .gtoreq.10 yr ago.

IT 1936-15-8, C.I. Acid orange 10 2783-94-0

(biol. activity of, carcinogenic and mutagenic potencies in relation to)

RN 1936-15-8 HCA

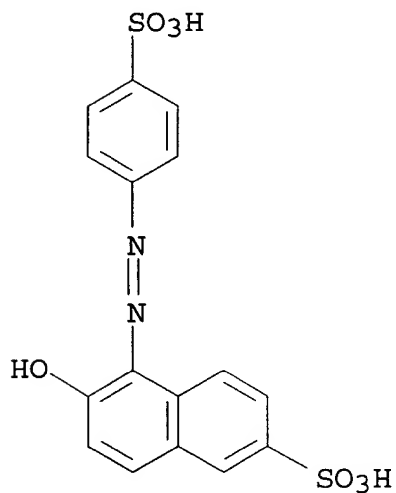
CN 1,3-Naphthalenedisulfonic acid, 7-hydroxy-8-(phenylazo)-, disodium salt (9CI) (CA INDEX NAME)



●2 Na

RN 2783-94-0 HCA

CN 2-Naphthalenesulfonic acid, 6-hydroxy-5-[(4-sulfophenyl)azo]-, disodium salt (9CI) (CA INDEX NAME)



●2 Na

CC 4-6 (Toxicology)

IT 50-55-5, Reserpine 50-81-7, biological studies 57-06-7, Allyl isothiocyanate 57-13-6D, Urea, derivs. 59-42-7 59-87-0,

Nitrofurazone 69-53-4, Ampicillin 69-65-8, D-Mannitol 71-43-2, Benzene, biological studies 71-43-2D, Benzene, derivs. 75-27-4, Bromodichloromethane 75-35-4, Vinylidene chloride, biological studies 75-56-9, Propylene oxide, biological studies 76-01-7, Pentachloroethane 78-42-2, Tris(2-ethylhexyl)phosphate 78-59-1, Isophorone 78-87-5, 1,2-Dichloropropane 79-01-6, Trichloroethylene, biological studies 79-57-2 80-05-7, Bisphenol A, biological studies 80-62-6, Methyl methacrylate 82-68-8, Pentachloronitrobenzene 83-79-4, Rotenone 85-68-7, Butyl benzyl phthalate 87-62-7, 2,6-Xylidine 90-41-5 90-43-7, o-Phenylphenol 92-52-4D, Biphenyl, bromo derivs. 95-50-1, 1,2-Dichlorobenzene 96-12-8, 1,2-Dibromo-3-chloropropane 97-53-0, Eugenol 99-57-0, 2-Amino-4-nitrophenol 100-40-3, 4-Vinylcyclohexene 101-77-9 101-80-4 101-90-6, Diglycidyl resorcinol ether 103-23-1, Di(2-ethylhexyl) adipate 105-60-2, Caprolactam, biological studies 105-87-3, Geranyl acetate 106-46-7, 1,4-Dichlorobenzene 106-88-7, 1,2-Epoxybutane 106-93-4, 1,2-Dibromoethane 107-07-3, 2-Chloroethanol, biological studies 108-60-1, Bis(2-chloro-1-methylethyl) ether 108-78-1, Melamine, biological studies 108-90-7, Chlorobenzene, biological studies 108-95-2, Phenol, biological studies 109-69-3, N-Butyl chloride 112-53-8D, ethoxylated 113-92-8, Chlorpheniramine maleate 115-28-6, Chlorendic acid 117-81-7, Di(2-ethylhexyl) phthalate 119-53-9, Benzoin 121-79-9, Propyl gallate 121-88-0, 2-Amino-5-nitrophenol 124-48-1, Chlorodibromomethane 124-64-1, **Tetrakis(hydroxymethyl)phosphonium** chloride 126-92-1, Sodium 2-ethylhexyl sulfate 127-18-4, Tetrachloroethylene, biological studies 131-17-9, Diallyl phthalate 132-98-9, Penicillin VK 135-88-6, N-Phenyl-2-naphthylamine 136-77-6, 4-Hexylresorcinol 137-30-4, Ziram 140-11-4, Benzyl acetate 140-88-5, Ethyl acrylate 148-24-3, 8-Hydroxyquinoline, biological studies 149-30-4, 2-Mercaptobenzothiazole 150-68-5, Monuron 299-42-3 518-47-8, C.I. Acid yellow 73 542-75-6, 1,3-Dichloropropene 542-78-9, Malonaldehyde 563-47-3 569-61-9 584-84-9, 2,4-Toluene diisocyanate 597-25-1, Dimethyl morpholinophosphoramidate 598-55-0, Methyl carbamate 609-20-1, 2,6-Dichloro-p-phenylenediamine 630-20-6, 1,1,1,2-Tetrachloroethane 643-22-1 756-79-6, Dimethyl methylphosphonate 823-40-5 842-07-9, C.I. Solvent yellow 14 868-85-9, Dimethyl hydrogen phosphite 1163-19-5, Decabromodiphenyl oxide 1330-20-7, Xylene, biological studies 1746-01-6, 2,3,7,8-Tetrachlorodibenzo-p-dioxin 1936-15-8, C.I. Acid orange 10 2164-17-2, Fluometuron 2385-85-5, Mirex 2432-99-7, 11-Aminoundecanoic acid 2475-45-8, C.I. Disperse blue 1 **2783-94-0** 2784-94-3 2832-40-8, C.I. Disperse yellow 3 2835-39-4, Allyl isovalerate 2871-01-4 3567-69-9, C.I. Acid red 14 5160-02-1 6373-74-6, C.I. Acid orange 3 7601-54-9D, Trisodium phosphate, chlorinated 7704-34-9D, Sulfur, compds. 7772-99-8, Stannous chloride, biological studies 11113-50-1, Boric acid 17924-92-4, Zearalenone 21739-91-3, Cytembena 33229-34-4 56093-45-9, Selenium sulfide

(biol. activity of, carcinogenic and mutagenic
potencies in relation to)

L76 ANSWER 22 OF 28 HCA COPYRIGHT 2002 ACS

108:122007 Method of chemical electrographic image amplification using chemically active toner particles. Alexandrovich, Peter S.; Manthey, Joseph W.; May, John W.; Sreekumar, Chandra (Eastman Kodak Co., USA). U.S. US 4681828 A 19870721, 12 pp. (English). CODEN: USXXAM. APPLICATION: US 1986-902727 19860902.

AB A method of forming an electrog. image of high d. and contrast is claimed in which chem. active toner particles are used to trigger image amplification after development. The method is comprised of applying electrog. toner particles contg. an activator, which releases an amine upon heating, on a support having an electrostatic charge pattern and heating in contact with an image-receiving sheet contg. a Co(III) complex capable of releasing an amine on processing and an amplifier which, upon reaction with an amine, forms a dye or a dye precursor or reduces the Co(III) complex to release addnl. amine. Liq. or dry chem. active toner particles can be used to produce adequate visible images from a voltage differential of <5 V. Thus, a liq. developer prepd. from Reinecke salt, tert-butylstyrene-Li methacrylate copolymer, THF, and Isopar G was used to develop an electrostatic latent image on a Kodak Ektavolt Recording Film 50-101, dried to remove the liq. carrier, contacted with an image-receiving sheet coated with a layer contg. phthalaldehyde, hexamminecobalt(III) trifluoroacetate, ethylene-1,4-cyclohexylenedimethylene-1-methyl-2,4-benzenedisulfamide copolymer, and a silicone surfactant, and passed through a pair of heated rollers at 121.degree.-168.degree. to give a high-d. and high-contrast image.

IT 71610-58-7

(electrostatog. developers contg. activator and, for image amplification by reaction with cobalt ammine complexes and amplifiers in image-receiving layers)

RN 71610-58-7 HCA

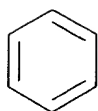
CN Ethanaminium, N,N,N-trimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]-, salt with 4-methylbenzenesulfonic acid (1:1), polymer with dodecyl 2-methyl-2-propenoate and ethenylmethylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 25013-15-4

CMF C9 H10

CCI IDS

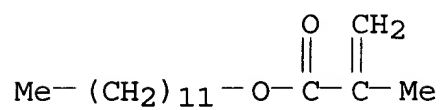


D1-Me

D1-CH=CH₂

CM 2

CRN 142-90-5
 CMF C16 H30 O2

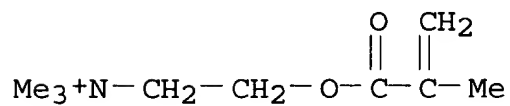


CM 3

CRN 40820-77-7
 CMF C9 H18 N O2 . C7 H7 O3 S

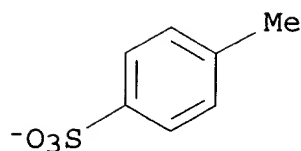
CM 4

CRN 33611-56-2
 CMF C9 H18 N O2



CM 5

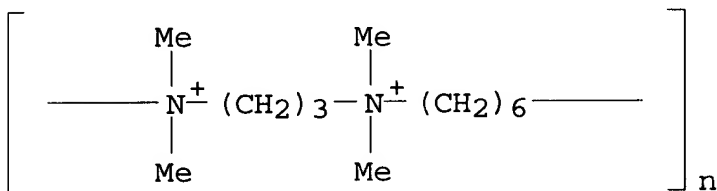
CRN 16722-51-3
 CMF C7 H7 O3 S



- IC ICM G03G013-22
 NCL 430097000
 CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 IT 50-81-7, Ascorbic acid, uses and miscellaneous 54-12-6 60-10-6, Dithizone 62-56-6, Thiourea, uses and miscellaneous 79-40-3, Dithiooxamide 85-41-6, Phthalimide 87-66-1 92-43-3, 1-Phenyl-3-pyrazolidinone 96-45-7, Ethylene thiourea 99-24-1, Methyl gallate 102-06-7 102-08-9, Thiocarbanilide 110-14-5, Succinamide 115-41-3, Pyrocatechol violet 117-39-5, Quercetin 120-72-9, uses and miscellaneous 120-93-4, 2-Imidazolidinone 123-31-9, uses and miscellaneous 123-56-8, Succinimide 131-91-9, 1-Nitroso-2-naphthol 139-33-3, EDTA disodium salt 149-91-7, Gallic acid, uses and miscellaneous 299-11-6, Phenazine methosulphate 461-72-3, Hydantoin 487-89-8, Indole-3-carboxaldehyde 506-87-6, Ammonium carbonate 569-58-4, Aurintricarboxylic acid ammonium salt 573-58-0, Congo Red 622-03-7 622-84-4 873-69-8 1141-59-9 1863-63-4, Ammonium benzoate 2215-33-0, 2-Pyridinecarboxaldehyde-2-pyridylhydrazone 2475-89-0 5461-28-9 6163-58-2, Tri-*o*-tolylphosphine 7773-06-0, Ammonium sulfamate 7783-20-2, uses and miscellaneous 7783-28-0, Dibasic ammonium phosphate 11098-84-3, Ammonium molybdate 13047-10-4, 4,4-Bis(hydroxymethyl)-1-phenyl-3-pyrazolidone 13047-13-7 13573-16-5, Reinecke salt 14694-95-2, Tris(triphenylphosphine)chlororhodium 29751-68-6 52722-53-9 79925-42-1 84909-18-2 91584-31-5 113177-31-4
 (activator, electrostatog. developers contg., for image amplification by reaction with cobalt ammine complex and amplifier in image-receiving layers)
 IT 71610-58-7 76624-16-3 113177-30-3
 (electrostatog. developers contg. activator and, for image amplification by reaction with cobalt ammine complexes and amplifiers in image-receiving layers)
- L76 ANSWER 23 OF 28 HCA COPYRIGHT 2002 ACS
 108:101757 Characterization of a ruthenium dioxide hydrate colloid and evaluation of its ability to mediate the oxidation of water. Mills, Andrew; McMurray, Neil (Dep. Chem., Univ. Coll. Swansea, Swansea, SA2 8PP, UK). Journal of the Chemical Society, Faraday Transactions 1: Physical Chemistry in Condensed Phases, 84(2), 379-90, 1 plate (English) 1988. CODEN: JCFTAR. ISSN: 0300-9599.
 AB A colloid of RuO₂.xH₂O supported by polybrene was prepd., characterized, and assessed as an O₂ catalyst. Thermal anal. of RuO₃.xH₂O pptd. from the colloid indicated the presence of both

weakly and tightly bound H₂O. Dynamic light scattering indicated that the coagulated colloidal particles were large (d = 825 nm) and pos. charged; TEM demonstrated that the colloidal particles were themselves aggregates of crystallites too small (<10 nm) to be clearly resolved. The colloid proved unstable towards coagulation under conditions of high electrolyte concn. (.gtoreq.10⁻³ mol dm⁻³) even when the electrolyte was H₂SO₄. In the presence of CeIV ions the colloid did show some **activity** as an O catalyst (O yield = 73%) but also underwent some anodic corrosion to RuO₄ (27%). At low concns. of CeIV ions the colloid mediated the oxidn. of polybrene over that of H₂O by the CeIV ions. Kinetic studies performed under these conditions and in the presence of a high const. background concn. of polybrene (0.015 g dm⁻³) showed the kinetics to be biphasic with an initial fast step (assocd. with charging of the catalyst) followed by a 2nd step which was proportional to the concns. of both CeIV ions and colloid. Under conditions where no extra polybrene was added to dilns. of the colloid some O evolution was obsd. (.apprx.20%) and the kinetics of CeIV disappearance was biphasic, although more complicated and difficult to interpret.

IT 28728-55-4, Polybrene
(catalysts from ruthenium dioxide hydrate colloid and, for oxidn. of water, characterization and stability of)
RN 28728-55-4 HCA
CN Poly[(dimethyliminio)-1,3-propanediyl(dimethyliminio)-1,6-hexanediyl dibromide] (9CI) (CA INDEX NAME)



● 2 Br⁻

CC 67-2 (Catalysis, Reaction Kinetics, and Inorganic Reaction Mechanisms)

Section cross-reference(s): 52

IT 28728-55-4, Polybrene
(catalysts from ruthenium dioxide hydrate colloid and, for oxidn. of water, characterization and stability of)

L76 ANSWER 24 OF 28 HCA COPYRIGHT 2002 ACS

107:39201 Hexafluoroacetone. Sonoi, Takehiro; Iida, Takao (Nippon Mectron Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 61277645 A2 19861208 Showa, 3 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1985-120322 19850603.

AB Hexafluoroacetone (I), used as a monomer for polymers and as a starting material for crosslinking agents, drugs, and agrochems., was prepd. by treating (CF₃)₂C:CFOR (II, R = alkyl) with O under photoirradn. Thus, II, H₂O, **Rose Bengal**, and **quaternary ammonium** salt were mixed for 40 h with bubbling of O under a Hg lamp to give 19.2% I.

IT **7782-44-7**, reactions
(oxidn. by, of heptafluoroisobutenyl ethers under photoirradn., hexafluoroacetone from)

RN 7782-44-7 HCA

CN Oxygen (8CI, 9CI) (CA INDEX NAME)

O=O

IC ICM C07C049-167
ICS B01J019-12; C07C045-35

CC 23-15 (Aliphatic Compounds)
Section cross-reference(s): 1, 5, 35

IT **7782-44-7**, reactions
(oxidn. by, of heptafluoroisobutenyl ethers under photoirradn., hexafluoroacetone from)

L76 ANSWER 25 OF 28 HCA COPYRIGHT 2002 ACS

102:195265 Optical recording materials. (TDK Corp., Japan). Jpn. Kokai Tokkyo Koho JP 59201241 A2 19841114 Showa, 15 pp. (Japanese).
CODEN: JKXXAF. APPLICATION: JP 1983-74570 19830427.

AB Optical recording materials have a recording layer composed of light absorbers and a binder resin which is prepd. by crosslinking .gtoreq.1 resin having functional groups with a metal compd. type crosslinking agent. The recording layer may also contain a **singlet O** quencher. Thus, a poly(Me methacrylate) disk was treated with a Ti chelate compd., then coated with a compn. contg. nitrocellulose, diisopropyloxybis(acetylacetonato)titanium (a crosslinking agent) and 3,3'-diethyl-11-diphenylamino-10,12-ethylene-5,6,5',6'-dibenzothiatricarbocyanine perchlorate, and heated at 40.degree. to give a laser recording disk with improved durability.

IT **95482-21-6**
(laser recording materials contg., binder resins for)

RN 95482-21-6 HCA

CN Naphtho[2,3-d]thiazolium, 2-[2-[2-(diphenylamino)-3-[[3-(2-hydroxyethyl)naphtho[2,3-d]thiazol-2(3H)-ylidene]ethylidene]-1,4-cyclopentadien-1-yl]ethenyl]-3-(2-hydroxyethyl)-, perchlorate (salt), polymer with hexanedioic acid (9CI) (CA INDEX NAME)

CM 1

CRN 124-04-9

CMF C6 H10 O4

HO₂C-(CH₂)₄-CO₂H

CM 2

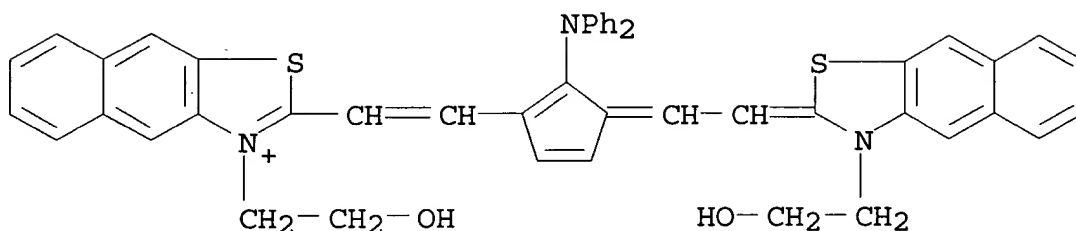
CRN 94659-15-1

CMF C47 H38 N3 O2 S2 . Cl O4

CM 3

CRN 94659-14-0

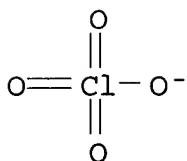
CMF C47 H38 N3 O2 S2



CM 4

CRN 14797-73-0

CMF Cl O4



IC G11B007-24

ICA B41M005-26; G11C013-04

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 95419-58-2 95482-21-6 95537-87-4

(laser recording materials contg., binder resins for)

IT 89918-28-5 94423-04-8

(singlet oxygen quencher, laser recording materials contg.)

L76 ANSWER 26 OF 28 HCA COPYRIGHT 2002 ACS

96:163339 Reversible oxygen-binding by the heme-mono-N-[3-(1-imidazolyl)propyl]amide incorporated in a coacervate. Tsuchida, Eishun; Nishide, Hiroyuki; Taguchi, Kouichi; Machida, Katsuichi (Dep. Polym. Chem., Waseda Univ., Tokyo, 160, Japan). Makromol. Chem., Rapid Commun., 3(3), 161-5 (English) 1982. CODEN: MCRCD4. ISSN: 0173-2803.

AB Although amides of Fe(III) protoporphyrin IX with

1-(3-aminopropyl)imidazole or 1-(5-aminopentyl)-2-methylimidazole are rapidly and irreversibly oxidized in aq. medium, when incorporated in coacervates of $[N+Me_2CH_2CH_2N+Me_2CH_2C_6H_4CH_2-p(2Cl-)]_n$ (I) [31514-57-5], poly(acrylic acid) (II) [9003-01-4], and/or poly(methacrylic acid) (III) [25087-26-7] they form adducts with O in aq. medium at -30.degree.. The half-life of the O adduct in I-III coacervate is longer than in I-II coacervate, suggesting that the more hydrophobic coacervate incorporates the porphyrin deriv. more strongly or provides a better environment for it. The ESR of spin-labeled **hemin** in I-III coacervate is similar to that in the solid state but different from that in DMSO soln., indicating that the coacervate immobilizes the heme deriv. and so retards irreversible oxidn.

IT 7782-44-7, reactions

(binding of, reversible, by porphyrin derivs. in coacervates of polyelectrolytes)

RN 7782-44-7 HCA

CN Oxygen (8CI, 9CI) (CA INDEX NAME)

O=O

IT 30619-25-1 31514-57-5

(oxygen binding by porphyrin derivs. in coacervates of)

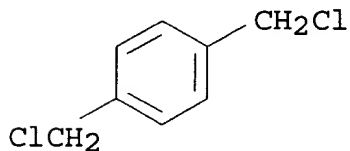
RN 30619-25-1 HCA

CN 1,2-Ethanediamine, N,N,N',N'-tetramethyl-, polymer with 1,4-bis(chloromethyl)benzene (9CI) (CA INDEX NAME)

CM 1

CRN 623-25-6

CMF C8 H8 Cl2



CM 2

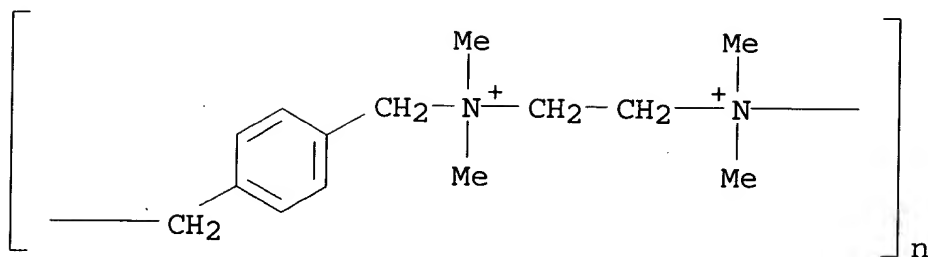
CRN 110-18-9

CMF C6 H16 N2

Me₂N-CH₂-CH₂-NMe₂

RN 31514-57-5 HCA

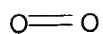
CN Poly[(dimethyliminio)-1,2-ethanediyl(dimethyliminio)methylene-1,4-phenylenemethylene dichloride] (9CI) (CA INDEX NAME)



● 2 Cl⁻

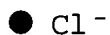
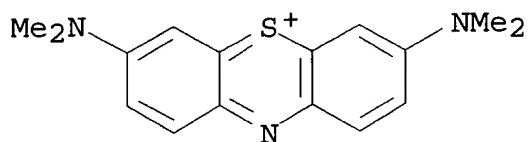
- CC 35-8 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 26
- ST oxygen binding porphyrin coacervate; imidazole deriv oxygen binding;
ionene polymer coacervate porphyrin; acrylic acid polymer
coacervate; methacrylic acid polymer coacervate; **hemin**
immobilization polymer coacervate
- IT **7782-44-7**, reactions
(binding of, reversible, by porphyrin derivs. in coacervates of
polyelectrolytes)
- IT 9003-01-4 25087-26-7 **30619-25-1 31514-57-5**
(oxygen binding by porphyrin derivs. in coacervates of)
- L76 ANSWER 27 OF 28 HCA COPYRIGHT 2002 ACS
- 95:92981 The effect of electron carriers and other ligands on oxygen
stability of clostridial hydrogenase. Khan, S. M.; Klibanov, A. M.;
Kaplan, N. O.; Kamen, M. D. (Dep. Nutr. Food Sci., Massachusetts
Inst. Technol., Cambridge, MA, 02139, USA). Biochim. Biophys. Acta,
659(2), 457-65 (English) 1981. CODEN: BBACAQ. ISSN: 0006-3002.
- AB The effects of various electron carriers, a substrate (H₂), and a
reversible inhibitor (CO) on the rate of irreversible O₂
inactivation of clostridial hydrogenase (EC 1.18.3.1) were studied
kinetically. Some electron carriers (e.g., clostridial ferredoxin
and Me viologen) greatly stabilize the enzyme; some (FAD, FMN)
drastically reduce its stability; whereas other (benzyl viologen and
methylene blue) only slightly alter the stability.
Competitive expts. indicate that stabilizers and destabilizers do
not compete with each other for binding with the active center of
hydrogenase. H₂ and CO do not affect the rate of the O₂
inactivation. Apparently, the active center of this hydrogenase
comprises 3 different independent subsites. The 1st one
(presumably an Fe atom of the Fe-S cluster) binds H₂ and CO and does
not contribute to the O₂ stability. The 2nd one binds stabilizers
like Me viologen, whereas the 3rd one binds destabilizers like FMN
and FAD.
- IT **7782-44-7**, biological studies
(hydrogenase stabilization against, subsite structure in relation

to)
 RN 7782-44-7 HCA
 CN Oxygen (8CI, 9CI) (CA INDEX NAME)



IT 61-73-4 31583-55-8
 (hydrogenase stabilization to oxygen by, subsite structure in
 relation to)

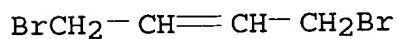
RN 61-73-4 HCA
 CN Phenothiazin-5-ium, 3,7-bis(dimethylamino)-, chloride (9CI) (CA
 INDEX NAME)



RN 31583-55-8 HCA
 CN 4,4'-Bipyridine, polymer with 1,4-dibromo-2-butene (8CI, 9CI) (CA
 INDEX NAME)

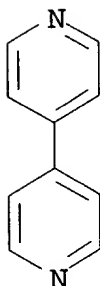
CM 1

CRN 6974-12-5
 CMF C4 H6 Br2



CM 2

CRN 553-26-4
 CMF C10 H8 N2



- CC 7-5 (Enzymes)
- IT 7782-44-7, biological studies
(hydrogenase stabilization against, subsite structure in relation to)
- IT 53-84-9 58-68-4 61-73-4 146-14-5 146-17-8 299-11-6
553-24-2 581-64-6 630-08-0, biological studies 956-48-9
1333-74-0, biological studies 1910-42-5 13096-46-3
31583-55-8 78723-05-4
(hydrogenase stabilization to oxygen by, subsite structure in relation to)
- L76 ANSWER 28 OF 28 HCA COPYRIGHT 2002 ACS
- 90:204986 Permeability of oxygen through polymers. I. A novel spectrophotchemical method. Petrak, K. (Res. Div., Kodak Ltd., Harrow/Middx., Engl.). J. Appl. Polym. Sci., 23(8), 2365-71 (English) 1979. CODEN: JAPNAB. ISSN: 0021-8995.
- AB A spectrophotchem. method based on measurement of the O flux by monitoring its reaction in the singlet excited state with a suitable O acceptor is described for detn. of the O permeability through polymer membranes. A detector layer, sandwiched between a support (quartz or glass) and the layer of the examd. polymer, contains a sensitizer (Rose Bengal) which on irradiation produces the singlet excited O from the ground-state O available, which then reacts with diphenylisobenzophenone (I) O acceptor. The changes in the O acceptor absorbance are directly related to the flux of O through the polymer membrane. The method is sensitive, and O flux of 10-10 mol could be detected when I was used. The std. deviation in the permeation coeff. detn. is <40%. The method was used to measure the O permeability of a group of water-sol. polymers.
- IT 7782-44-7, properties
(permeability of, through polymers, detn. of, spectrophotometric)
- RN 7782-44-7 HCA
- CN Oxygen (8CI, 9CI) (CA INDEX NAME)

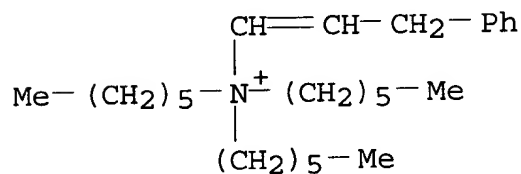
O=O

- IT 70333-45-8
(permeability of, to oxygen, detn. of, spectrometric)

RN 70333-45-8 HCA
 CN 1-Hexanaminium, N,N-dihexyl-N-(3-phenyl-1-propenyl)-, chloride,
 polymer with ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

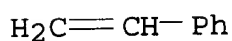
CRN 70333-44-7
 CMF C27 H48 N . Cl



● Cl⁻

CM 2

CRN 100-42-5
 CMF C8 H8



(styryl component)

CC 36-5 (Plastics Manufacture and Processing)
 IT 7782-44-7, properties
 (permeability of, through polymers, detn. of, spectrophotometric)
 IT 9002-89-5 9003-05-8 9004-32-4 25232-42-2 40399-52-8
 70333-43-6 70333-45-8 70479-63-9
 (permeability of, to oxygen, detn. of, spectrometric)